SONY

3-113-370-**13** (1)

# *Network Camera*

## User's Guide

Software Version 1.1

IPELA

**SNC-DF85N/DF85P** *DynaView*

**SNC-DF80N/DF80P** *SuperExwave*™

**SNC-DF50N/DF50P** *DynaView*

© 2007 Sony Corporation

# Table of Contents

## Overview

**How to Use This User's Guide ..... 5**
**System Requirements ..... 5**

## Preparation

**Connecting to a Computer or a Network ..... 6**
Connecting the camera to a computer ..... 6
Connecting the camera to a local network ..... 6
**Assigning the IP Address to the Camera ..... 7**
Assigning an IP address using the Setup Program ..... 7
When using Windows XP Service Pack 2 ..... 9
When using Windows Vista ..... 11
**Accessing the Camera Using the Web Browser 13**
**Basic Configuration by the Administrator ..... 15**

## Operating the Camera

**Administrator and User ..... 16**
**Logging in to Homepage — Welcome Page ..... 17**
Logging in as a user ..... 17
Displaying the Administrator menu directly .... 18
About viewers ..... 18
**Configuration of Main Viewer ..... 19**
Main menu ..... 20
Camera control section ..... 20
Monitor Image ..... 21
**Controlling the Monitor Image ..... 21**
Monitoring the camera image ..... 21
Zooming in the monitor image ..... 22
**Capturing a Monitor Image ..... 22**
Capturing a monitor image ..... 22
Saving the captured image ..... 23
**Using the Trigger Button ..... 23**
Sending a monitor image via e-mail ..... 23
Sending a monitor image to an FTP server ..... 23
Recording a camera image as a still image ..... 23
Controlling alarm output 1, 2 ..... 24
Controlling Day/Night function (SNC-DF85/DF80 only) ..... 24
Playing the audio file stored in the camera ..... 24
**Switching TCP/UDP Transmission Mode ..... 25**

## Administrating the Camera

**Basic Operations of Administrator Menu ..... 26**
How to setup the Administrator menu ..... 26
Configuration of Administrator menu ..... 27
**Configuring the System — System Menu ..... 28**
System Tab ..... 28
Date & time Tab ..... 29
Initialize Tab ..... 30
System log Tab ..... 31
Access log tab ..... 31
**Setting the Camera Image and Audio — Camera Menu ..... 32**
Common Tab ..... 32
Picture Tab ..... 33
Day/Night Tab (SNC-DF85/DF80 only) ..... 34
Video codec Tab ..... 35
Streaming Tab ..... 37
**Configuring the Network — Network Menu ..... 38**
Network Tab ..... 38
Dynamic IP address notification Tab — Notifying the IP Address ..... 39
**Using the 802.1X Authentication Function — 802.1X Menu ..... 41**
System configuration of 802.1X network ..... 41
Common Tab – Basic setting of 802.1X authentication function ..... 41
Client certificate Tab ..... 42
CA certificate Tab ..... 43
Setting the 802.1X authentication function – Example of Windows Server 2003 ..... 44
**Setting the User — User Menu ..... 47**
**Setting the Security — Security Menu ..... 48**
**Sending an Image via E-mail — e-Mail (SMTP) Menu ..... 49**
Common Tab — Setting the e-Mail (SMTP) Function ..... 49
Alarm sending Tab — Setting the e-mail sending mode when detecting the alarm ..... 50
Periodical sending Tab — Setting the periodical e-mail sending mode ..... 51
**Sending Images to FTP Server — FTP client Menu ..... 52**
Common Tab — Setting the FTP client function ..... 52
Alarm sending Tab — Setting the FTP client action when detecting the alarm ..... 52
Periodical sending Tab — Setting the periodical FTP client activity ..... 53
**Recording Images in Memory — Image memory Menu ..... 54**
Common Tab — Setting the image memory function ..... 55
Alarm recording Tab — Setting the Image memory function when detecting the alarm ...56
Periodical recording Tab — Setting the periodical recording mode ..... 57
Folder structure of image memory ..... 57
**Downloading Images from the Camera — FTP server Menu ..... 58**
**Setting the Alarm Output — Alarm output Menu ..... 59**

Alarm out 1, 2 Tab ..... 59
**Outputting Audio Linked to Alarm Detection — Voice alert Menu ..... 60**
**Voice alert 1, 2, 3 Tab ..... 60**
**Setting the Operations from the Viewer — Trigger Menu ..... 61**
**Setting the Schedule — Schedule Menu ..... 63**
**Setting the Alarm Buffer — Alarm buffer Menu ..... 64**
**Setting the Object Detection Function — Object detection Menu ..... 65**
What is unattended object detection ? ..... 65
Common Tab ..... 67
Unattended object setting Tab ..... 70

## Others

**Using the Supplied Setup Program ..... 72**
Starting the Setup Program ..... 72
Bandwidth control Tab ..... 72
Date time Tab ..... 73
Rebooting the camera ..... 73
**Using the SNC audio upload tool — Transmitting audio to camera ..... 74**
Installing the SNC audio upload tool ..... 74
Connecting the camera to the computer ..... 74
Using the SNC audio upload tool ..... 75
**Using the SNC video player — Playing video/audio file recorded with camera ..... 79**
Installing the SNC video player ..... 79
Using the SNC video player ..... 80
**Using the SNC privacy masking tool — Masking a Camera Image ..... 81**
Installing the SNC privacy masking tool ..... 81
Using the SNC privacy masking tool ..... 81
Setting a privacy mask ..... 82
**Using the Custom Homepage Installer ..... 83**
Uploading the homepage to the camera using the Custom Homepage Installer ..... 83
**Assigning the IP Address to the Camera Using ARP Commands ..... 85**
**Using the SNMP ..... 86**
1. Inquiry Commands ..... 86
2. Setting Commands ..... 86
**Glossary ..... 87**
**Index ..... 90**

## Overview

- You should keep in mind that the images or audio you are monitoring may be protected by privacy and other legal rights, and the responsibility for making sure you are complying with applicable laws is yours alone.
- Access to the images and audio is protected only by a user name and the password you set up. No further authentication is provided nor should you presume that any other protective filtering is done by the service. Since the service is Internet-based, there is a risk that the image or audio you are monitoring can be viewed or used by a third-party via the network.
- SONY IS NOT RESPONSIBLE, AND ASSUMES ABSOLUTELY NO LIABILITY TO YOU OR ANYONE ELSE, FOR SERVICE INTERRUPTIONS OR DISCONTINUATIONS OR EVEN SERVICE CANCELLATION. THE SERVICE IS PROVIDED AS-IS, AND SONY DISCLAIMS AND EXCLUDES ALL WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO THE SERVICE INCLUDING, BUT NOT LIMITED TO, ANY OR ALL IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR THAT IT WILL OPERATE ERROR-FREE OR CONTINUOUSLY.
- Always make a test recording, and verify that it was recorded successfully. SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF FAILURE OF THIS UNIT OR ITS RECORDING MEDIA, EXTERNAL STORAGE SYSTEMS OR ANY OTHER MEDIA OR STORAGE SYSTEMS TO RECORD CONTENT OF ANY TYPE.
- Always verify that the unit is operating properly before use. SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF THE LOSS OF PRESENT OR PROSPECTIVE PROFITS DUE TO FAILURE OF THIS UNIT, EITHER DURING THE WARRANTY PERIOD OR AFTER EXPIRATION OF THE WARRANTY, OR FOR ANY OTHER REASON WHATSOEVER.
- If you lose data by using this unit, SONY accepts no responsibility for restoration of the data.

## NOTICE TO USERS

© 2007 Sony Corporation. All rights reserved. This manual or the software described herein, in whole or in part, may not be reproduced, translated or reduced to any machine readable form without prior written approval from Sony Corporation.

SONY CORPORATION PROVIDES NO WARRANTY WITH REGARD TO THIS MANUAL, THE SOFTWARE OR OTHER INFORMATION CONTAINED HEREIN AND HEREBY EXPRESSLY DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE WITH REGARD TO THIS MANUAL, THE SOFTWARE OR SUCH OTHER INFORMATION. IN NO EVENT SHALL SONY CORPORATION BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES, WHETHER BASED ON TORT, CONTRACT, OR OTHERWISE, ARISING OUT OF OR IN CONNECTION WITH THIS MANUAL, THE SOFTWARE OR OTHER INFORMATION CONTAINED HEREIN OR THE USE THEREOF.

Sony Corporation reserves the right to make any modification to this manual or the information contained herein at any time without notice.
The software described herein may also be governed by the terms of a separate user license agreement.

- "IPELA" and IPELA are trademarks of Sony Corporation.
- DynaView™ is a registered trademark of Sony Corporation.
- "SuperExwave™" is a trademark of Sony Corporation.
- Microsoft, Windows, Internet Explorer and MS-DOS are registered trademarks of Microsoft Corporation in the United States and/or other countries.
- Java is a trademark of Sun Microsystems, Inc. in the United States and other countries.
- Intel and Pentium are registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.
- Adobe, Acrobat and Adobe Reader are trademarks of Adobe Systems Incorporated in the United States and/or other countries.
- CompactFlash and CF are trademarks of SanDisk Corporation, registered in the United States and other countries.

All other company and product names are trademarks or registered trademarks of the respective companies or their respective makers.

# How to Use This User's Guide

This User's Guide explains how to operate the SNC-DF85N/DF85P/DF80N/DF80P/DF50N/DF50P Network Camera from a computer.
The User's Guide is written to be read on the computer display.
As this section gives tips on using the User's Guide, read it before you operate the camera.

### Jumping to the related page

When you read the User's Guide on the computer display, click on the sentence to jump to the related page.

### Software display examples

Note that the displays shown in the User's Guide are explanatory examples. Some displays may be different from the ones which appear as you operate the application software.
The illustrations of the camera and menu display in the User's Guide show the SNC-DF80 (SNC-DF80N or SNC-DF80P) as an example.

### Printing the User's Guide

Depending on your system, certain displays or illustrations in the User's Guide, when printed out, may differ from those as portrayed on your screen.

### Installation Manual (printed matter)

The supplied Installation Manual describes the names and functions of parts and controls of the Network Camera, connecting examples, how to set up the camera, and safety and operating precautions. Be sure to read the Installation Manual before operating.

# System Requirements

These are the requirements for the computer that displays the image or controls the camera.

### Processor

Intel Pentium 4, 1.5 GHz or higher (Pentium 4, 2.4 GHz or higher recommended)

### RAM

256 MB or more

### OS

SNC-DF85N/DF85P:
Microsoft Windows XP, Windows Vista
SNC-DF80N/DF80P/DF50N/DF50P:
Microsoft Windows 2000, Windows XP, Windows Vista

### Web browser

Microsoft Internet Explorer Ver.6.0 or later

## *Preparation*

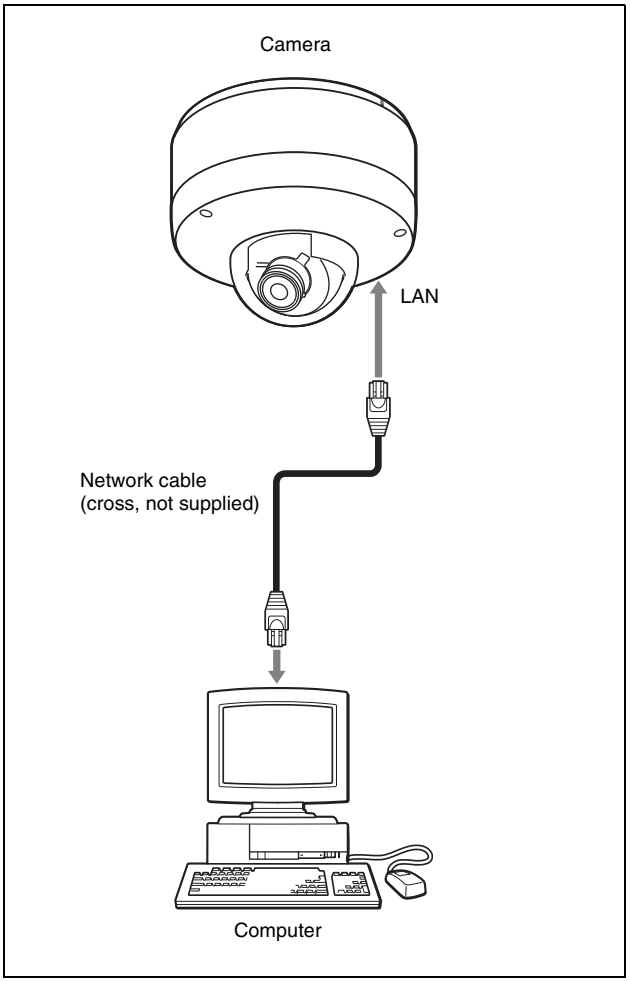
The Preparation section explains what the administrator has to prepare for monitoring images after installation and connection of the camera.

# Connecting to a Computer or a Network

To connect to the computer, use a commercially available network cable (cross cable).
To connect to the network, use a commercially available network cable (straight cable).

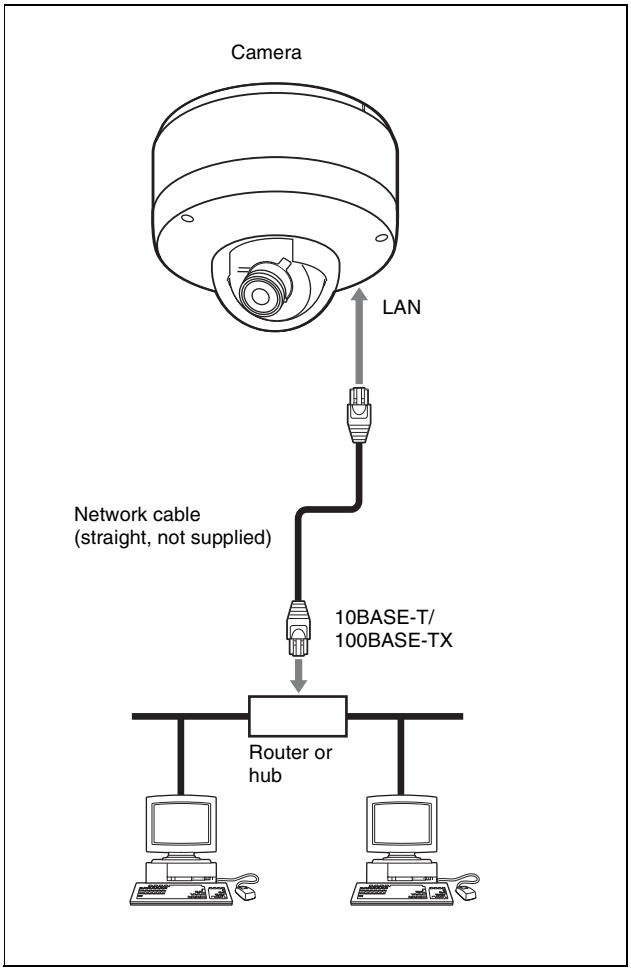
## Connecting the camera to a computer

Using a commercially available network cable (cross), connect the LAN port on the camera to a computer.




## Connecting the camera to a local network

Using a commercially available network cable, connect the LAN port on the camera to a hub in the network.



# Assigning the IP Address to the Camera

To connect the camera to a network, you need to assign a new IP address to the camera when you install it for the first time.
You can assign an IP address in two ways:

- Using the setup program stored in the supplied CD-ROM (see page 7)
- Using the ARP (Address Resolution Protocol) commands (see page 85)

This section explains how to assign an IP address to the camera using the supplied setup program and how to configure the network.

Before starting, connect the camera, referring to "Connecting to a Computer or a Network" on page 6. Consult the administrator of the network about the assigned IP address.

**Notes**

- The Setup Program may not operate correctly if you use a personal firewall or antivirus software in your computer. In that case, disable the software or assign an IP address to the camera using another method. For example, see "Assigning the IP Address to the Camera Using ARP Commands" on page 85.
- If you are using Windows XP Service Pack 2 or Windows Vista, disable the Windows Firewall function. Otherwise the IP Setup Program will not operate correctly. For the setting, see "Configuring Windows Firewall" in "When using Windows XP Service Pack 2" on page 10 or "Configuring Windows Firewall" in "When using Windows Vista" on page 12.

## Assigning an IP address using the Setup Program

**1** Insert the CD-ROM in your CD-ROM drive.
A cover page appears automatically in your Web browser.
If it does not appear automatically in the Web browser, double-click on the index.htm file on the CD-ROM.

When you are using Windows Vista, pop-up "AutoPlay" may appear. For details, "Installing software" in "When using Windows Vista" on page 11.

**2** Click the **Setup** icon of IP Setup Program.
The "File Download" dialog opens.

When you are using Windows XP Service Pack 2 or Windows Vista, a message regarding the active contents may appear. For details, see "Installing software" in "When using Windows XP Service Pack 2" on page 9 or "Installing software" in "When using Windows Vista" on page 11.

**3** Click **Open**.

**Note**

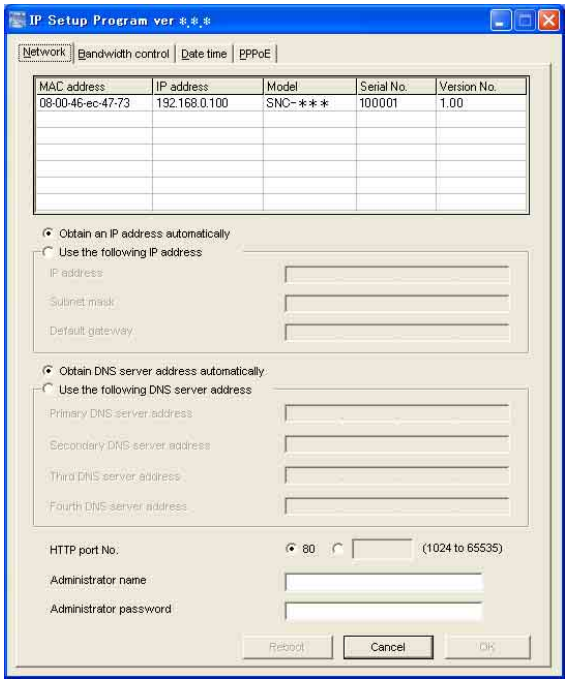
If you click "Save this program to disk" on the "File Download" dialog, you will not be able to perform set up correctly. Delete the downloaded file, and click the **Setup** icon again.

**4** Install the IP Setup Program on your computer using the wizard.
If the Software License Agreement is displayed, read it carefully and click **Accept** to continue with the installation.

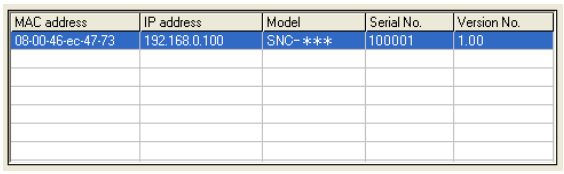
**5** Start the IP Setup Program.

When you are using Windows Vista, message "User Account Control – An unidentified program wants access to your computer" may appear. In this case, click **Allow**.

The program detects the network cameras connected to the local network and lists them on the Network tab window.



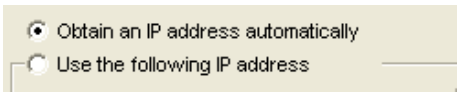
**6** Click on the camera in the list to which you want to assign a new IP address.




The network settings for the selected camera are displayed.

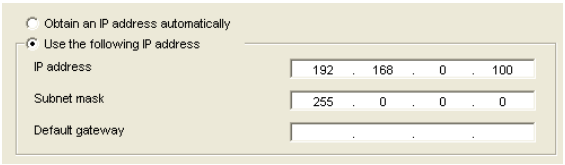
**7** Set the IP address.

**To obtain the IP address automatically from a DHCP server:**
Select **Obtain an IP address automatically**.




The IP address, Subnet mask and Default gateway are assigned automatically.

**To specify the IP address manually:**
Select **Use the following IP address**, and type the IP address, Subnet mask and Default gateway in the relevant boxes.


Obtain an IP address automatically
Use the following IP address
IP address
192 . 168 . 0 . 100
Subnet mask
255 . 0 . 0 . 0
Default gateway

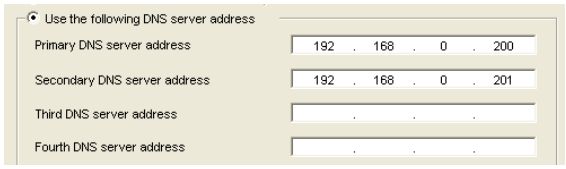
**Note**

When you select **Obtain an IP address automatically**, make sure that the DHCP server is operating on the network.

**8** Set the DNS server address.

**To obtain the DNS server addresses automatically:**
Select **Obtain DNS server address automatically**.

**To specify the DNS server addresses manually:**
Select **Use the following DNS server address**, and type the Primary DNS server address and Secondary DNS server address in the relevant boxes.


Use the following DNS server address
Primary DNS server address
192 . 168 . 0 . 200
Secondary DNS server address
192 . 168 . 0 . 201
Third DNS server address
Fourth DNS server address

**Note**

The Third DNS server address and Fourth DNS server address are invalid for this camera.

**9** Set the HTTP port No.

Normally, select **80** for the HTTP port No. To use another port number, type the port number between 1024 and 65535 in the text box.

**10** Type the Administrator name and Administrator password.

The factory settings of both items are “admin.”

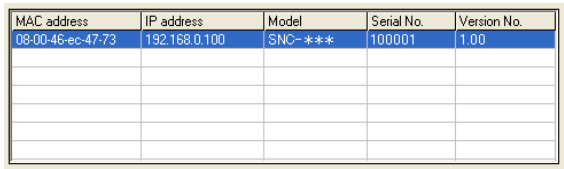
**Note**

You cannot change the Administrator name and Administrator password in this step. To change these items, see “Setting the User — User Menu” on page 47.

**11** Confirm that all items are correctly set, then click **OK**.

If “Setting OK” is displayed, the IP address is correctly assigned.

**12** To access the camera directly, double-click the camera name in the list.



**Tip**

- The factory setting of the camera network is as follows.
  IP address:192.168.0.100
  Subnet mask:255.0.0.0
- When you select the camera in the network tab and right-click Copy, and the camera's **MAC address, DHCP/FIXED*, IP address, Port number, Model name, Serial number** and **Version number** can be copied in the clipboard. When you hold down **Ctrl** and press **a**, you can select all cameras in the network tab.

  * **DHCP** stands for a DHCP setting. **FIXED** stands for a fixed IP address.

The welcome page of the network camera is displayed in the Web browser.

Display sample: SNC-DF80N

**Note**

If the IP address is not set correctly, the welcome page does not appear after step 12. In that case, try to set the IP address again.

## When using Windows XP Service Pack 2

### Installing software

A warning message regarding the active contents may appear when you install software such as IP Setup Program from CD-ROM. In this case, operate as follows:

Example: In case of IP Setup Program

If message "Internet Explorer" appears, click **Yes**.

Internet Explorer
Active content can harm your computer or disclose personal information. Are you sure that you want to allow CDs to run active content on your computer?
What you should know about active content...
In the future, do not show this message.
Yes
No

If message "File Download – Security Warning" appears, click **Run**.

File Download - Security Warning
Do you want to run or save this file?
Name: SETUP.EXE
Type: Application, 58.5 KB
From: G:\IpSetupProgram
Run
Save
Cancel
While files from the Internet can be useful, this file type can potentially harm your computer. If you do not trust the source, do not run or save this software. What's the risk?

**Note**

If you select **Save** in the "File Download – Security Warning" dialog, you will not be able to perform installation correctly. Delete the downloaded file, and click the **Setup** icon again.

If message "Internet Explorer – Security Warning" appears, click **Run**.

Internet Explorer - Security Warning
The publisher could not be verified. Are you sure you want to run this software?
Name: SETUP.EXE
Publisher: Unknown Publisher
Run
Don't Run
This file does not have a valid digital signature that verifies its publisher. You should only run software from publishers you trust. How can I decide what software to run?

The software installation starts.

### Installing ActiveX Control

During installation of ActiveX Control, the information bar or "Security Warning" may appear. In this case, operate as follows:

If message “Information Bar” appears, click **OK**.

Information Bar
Did you notice the Information Bar?
The Information Bar alerts you when Internet Explorer blocks a pop-up window or file download that might not be safe. If a Web page does not display properly, look for the Information Bar (near the top of your browser).
Do not show this message again.
Learn about the Information Bar...
OK

If the information bar appears, click on the bar and select **Install ActiveX Control…**.

If “ Internet Explorer – Security Warning” appears, click **Install**.

Internet Explorer - Security Warning
Do you want to install this software?
Name: Sony Network Camera viewer
Publisher: Sony Corporation
More options
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

The installation of ActiveX Control starts. When installation is completed, the main viewer or the Object detection menu appears.

## Configuring Windows Firewall

The IP Setup Program or SNC audio upload tool may not operate correctly depending on the configuration of Windows Firewall. (No cameras are shown in the list even if they are detected.) In this case, confirm the Windows Firewall configuration as follows:

Example: In case of IP Setup Program

**1** Select **Control Panel** from the Start menu of Windows.

**2** Select **Security Center** of the working field.

**3** Select **Windows Firewall** and select **Off** in the Windows Firewall dialog.

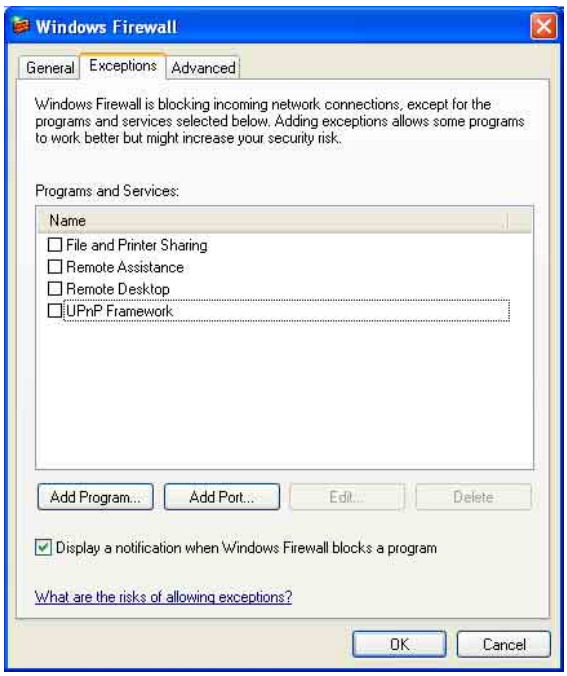
Windows Firewall
General
Exceptions
Advanced
Windows Firewall is helping to protect your PC
Windows Firewall helps protect your computer by preventing unauthorized users from gaining access to your computer through the Internet or a network.
On (recommended)
This setting blocks all outside sources from connecting to this computer, with the exception of those selected on the Exceptions tab.
Don't allow exceptions
Select this when you connect to public networks in less secure locations, such as airports. You will not be notified when Windows Firewall blocks programs. Selections on the Exceptions tab will be ignored.
Off (not recommended)
Avoid using this setting. Turning off Windows Firewall may make this computer more vulnerable to viruses and intruders.
What else should I know about Windows Firewall?
OK
Cancel

The cameras will be displayed in the list.

If you want to keep Windows Firewall **On**, continue with the following steps.

**4** Select the “Exceptions” tab.

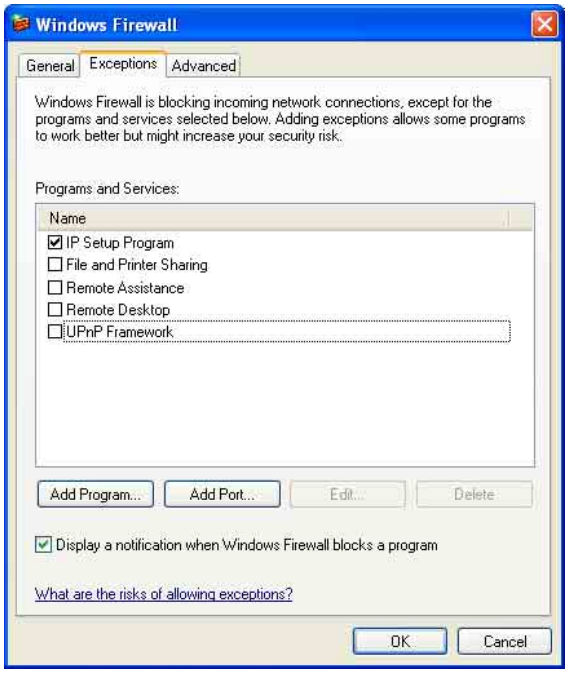
**5** Select **Add Program…**.



**6** In the Add Program dialog, select **IP Setup Program** and click **OK**.

Then the IP Setup Program is added to the Programs and Services list.

**7** Click **OK**.




When the above procedure is completed, the cameras connected in the local network are displayed in the IP Setup Program.

## When using Windows Vista

### Installing software

A warning message regarding the active contents may appear when you install software such as IP Setup Program from CD-ROM. In this case, operate as follows:

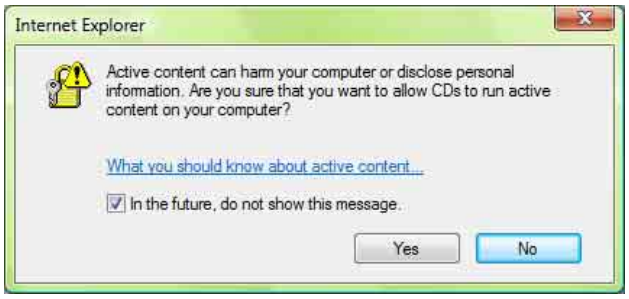
Example: In case of IP Setup Program

If pop-up "AutoPlay" appears when a CD-ROM is inserted into the CD-ROM drive, click **Install or run program**.

**Note**

If you click **Open folder to view files**, Web browser will not open automatically. In this case, double-click the "index.htm" file in the CD-ROM.

If message "Internet Explorer" appears, click **Yes**.


Internet Explorer
Active content can harm your computer or disclose personal information. Are you sure that you want to allow CDs to run active content on your computer?
What you should know about active content...
In the future, do not show this message.
Yes
No

If message "File Download – Security Warning" appears, click **Run**.

File Download - Security Warning
Do you want to run or save this file?
Name: SETUP.EXE
Type: Application, 58.5KB
From: E:\IpSetupProgram
Run
Save
Cancel
While files from the Internet can be useful, this file type can potentially harm your computer. If you do not trust the source, do not run or save this software. What's the risk?

**Note**

If you select **Save** in the "File Download – Security Warning" dialog, you will not be able to perform

installation correctly. Delete the downloaded file, and click the Setup icon again.

If message “Internet Explorer – Security Warning” appears, click **Run**.

Internet Explorer - Security Warning
The publisher could not be verified. Are you sure you want to run this software?
Name: SETUP.EXE
Publisher: Unknown Publisher
Run
Don't Run
This file does not have a valid digital signature that verifies its publisher. You should only run software from publishers you trust. How can I decide what software to run?

If message “User Account Control – An unidentified program wants access to your computer” appear, click **Allow**.

The software installation starts.

## Starting the software

When you start software such as IP Setup Program, message “User Account Control – An unidentified program wants access to your computer” may appear. In this case, click **Allow**.

## Installing ActiveX Control

During installation of ActiveX Control, the information bar or “Security Warning” may appear. In this case, operate as follows:

If message “Information Bar” appears, click **OK**.

Information Bar
Did you notice the Information Bar?
The Information Bar alerts you to security-related conditions (for example, if a potentially unsafe file or pop-up was just blocked). If a webpage does not display properly, look for the Information Bar at the top of the page and click it.
Don't show this message again
Learn about the Information Bar
Close

If the information bar appears, click on the bar and select **Install ActiveX Control…**.

This website wants to install the following add-on: 'Sony Network Camera viewer' from 'Sony Corporation'. If you trust the website and the add-on and want to install it, click here...
IPELA
Network Camera SNC-***
Setting
Home
Install ActiveX Control...
What's the Risk?
More information

If message “User Account Control – Windows needs your permission to continue” appear, click **Continue**.

If “Internet Explorer – Security Warning” appears, click **Install**.

Internet Explorer - Security Warning
Do you want to install this software?
Name: Sony Network Camera viewer
Publisher: Sony Corporation
More options
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

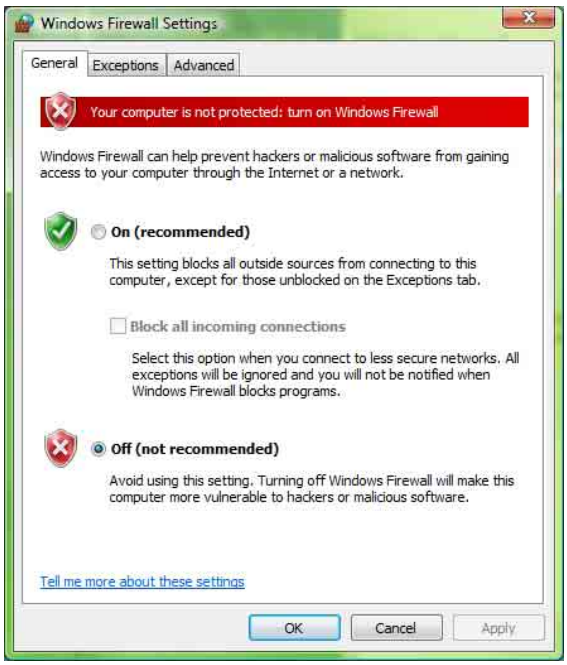
The installation of ActiveX Control starts. When installation is completed, the main viewer or the Object detection menu appears.

## Configuring Windows Firewall

The IP Setup Program or SNC audio upload tool may not operate correctly depending on the configuration of Windows Firewall. (No cameras are shown in the list even if they are detected.) In this case, confirm the Windows Firewall configuration as follows:

Example: In case of IP Setup Program

1. Select **Control Panel** from the Start menu of Windows.
2. Click **Windows Firewall**.
3. Select **Turn Windows Firewall on or off**. “User Account Control – Windows needs your permission to continue” may appear. In this case, click **Continue**.
4. Select **Off** in the “General” tab.

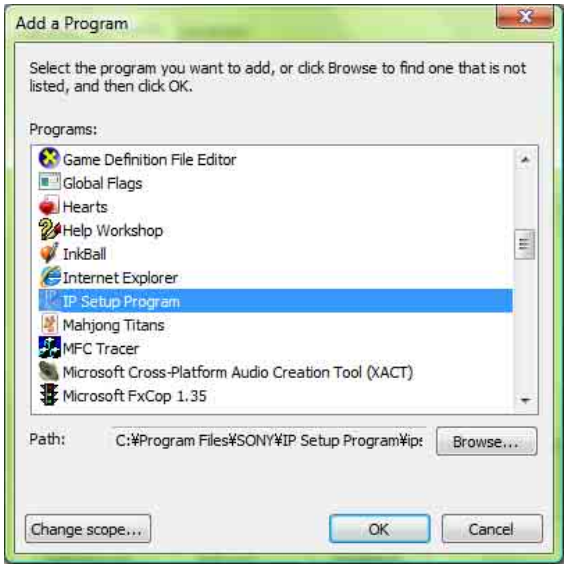

Windows Firewall Settings
General
Exceptions
Advanced
Your computer is not protected: turn on Windows Firewall
Windows Firewall can help prevent hackers or malicious software from gaining access to your computer through the Internet or a network.
On (recommended)
This setting blocks all outside sources from connecting to this computer, except for those unblocked on the Exceptions tab.
Block all incoming connections
Select this option when you connect to less secure networks. All exceptions will be ignored and you will not be notified when Windows Firewall blocks programs.
Off (not recommended)
Avoid using this setting. Turning off Windows Firewall will make this computer more vulnerable to hackers or malicious software.
Tell me more about these settings
OK
Cancel
Apply

The cameras will be displayed in the list.
If you want to keep Windows Firewall **On**, continue with the following steps.

**5** Select the “Exceptions” tab.

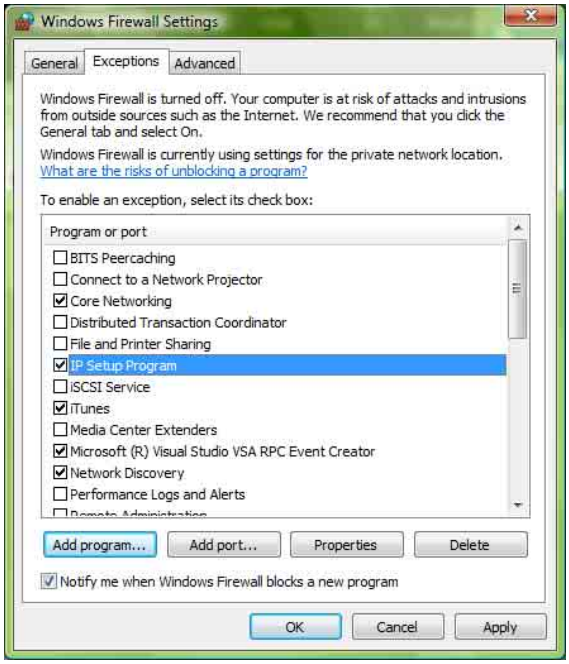
**6** Select **Add Program…**.

**7** If the Add Program dialog appears, select **IP Setup Program** and click **OK**.




Then the IP Setup Program is added to the Program or port list.

**8** Click **OK**.

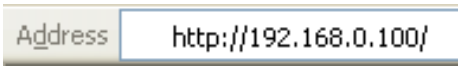

Windows Firewall Settings
General
Exceptions
Advanced
Windows Firewall is turned off. Your computer is at risk of attacks and intrusions from outside sources such as the Internet. We recommend that you click the General tab and select On.
Windows Firewall is currently using settings for the private network location.
What are the risks of unblocking a program?
To enable an exception, select its check box:
Program or port
BITS Peercaching
Connect to a Network Projector
Core Networking
Distributed Transaction Coordinator
File and Printer Sharing
IP Setup Program
iSCSI Service
iTunes
Media Center Extenders
Microsoft (R) Visual Studio VSA RPC Event Creator
Network Discovery
Performance Logs and Alerts
Add program...
Add port...
Properties
Delete
Notify me when Windows Firewall blocks a new program
OK
Cancel
Apply

When the above procedure is completed, the cameras connected in the local network are displayed in the IP Setup Program.

# Accessing the Camera Using the Web Browser

After the IP address has been assigned to the camera, check that you can actually access the camera using the Web browser installed on your computer.
Use Internet Explorer as the Web browser.

**1** Start the Web browser on the computer and type the IP address of the camera in the URL box.




The welcome page is displayed.

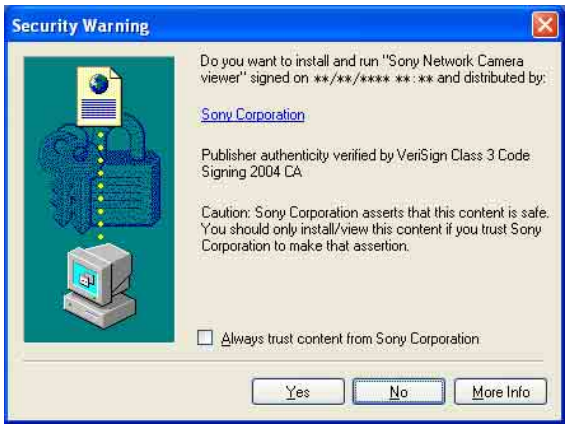
Display sample: SNC-DF80N

**2** Click **Enter**.
The main viewer is displayed.

If the main viewer is displayed correctly, accessing the camera is confirmed.

### When the main viewer of the camera is displayed for the first time

When you click **Enter**, “Security Warning” is displayed. When you click **Yes**, ActiveX control is installed and the main viewer is displayed.


Security Warning
Do you want to install and run "Sony Network Camera viewer" signed on **/**/**** **:** and distributed by:
Sony Corporation
Publisher authenticity verified by VeriSign Class 3 Code Signing 2004 CA
Caution: Sony Corporation asserts that this content is safe. You should only install/view this content if you trust Sony Corporation to make that assertion.
Always trust content from Sony Corporation
Yes
No
More Info

**Notes**

- If **Automatic configuration** is enabled in the Local Area Network (LAN) Settings of Internet Explorer, the image may not be displayed. In that case, disable **Automatic configuration** and set the Proxy server manually. For the setting of the Proxy server, consult your network administrator.
- When you install ActiveX Control, you should be logged in to the computer as Administrator.
- When you are using Windows XP Service Pack 2 or Windows Vista, the information bar or “Security Warning” may appear as you click **Enter**. For details, see “Installing ActiveX Control” in “When using Windows XP Service Pack 2” on page 9 or “Installing ActiveX Control” in “When using Windows Vista” on page 12.

**Tip**

Every page of this software is optimized as display character size **Medium** for Internet Explorer.

### To display the welcome page and the main viewer correctly

To operate the welcome page and the main viewer correctly, set the security level of the Internet Explorer to **Medium** or lower, as follows:

**1** Select **Tools** from the menu bar for Internet Explorer, then select **Internet Options** and click the **Security** tab.

**2** Click the **Internet** icon (when using the camera via the Internet) or **Local intranet** icon (when using the camera via a local network).

**3** Set the slider to **Medium** or lower. (If the slider is not displayed, click **Default Level**.)

### When using antivirus software, etc. on the computer

- When you use antivirus software, security software, personal firewall or pop-up blocker on your computer, the camera performance may be reduced, for example, the frame rate for displaying the image may be lower.
- The Web page displayed when you log in to the camera uses JavaScript. The display of the Web page may be affected if you use antivirus software or other software described above on your computer.

# Basic Configuration by the Administrator

You can monitor the camera image by logging in with the initial conditions set for this network camera. You can also set various functions according to the installing position, network conditions or purpose of the camera. We recommend you configure the following items before monitoring images from the camera.

| Setting contents | Setting menu |
|---|---|
| Set the format of the image sent from the camera. | Video codec Tab (page 35) |
| Select the brightness of the image sent from the camera. | Exposure (page 33) Brightness (SNC-DF80 only) (page 34) |
| Select the quality of the image sent from the camera. | Video codec Tab (page 35) |
| Select the view size of the image. | View size (page 20) |
| Select whether the audio from the external microphone is sent or not. | Microphone (page 32) |
| Synchronize the date and time of the camera with those of the computer. | Date & time Tab (page 29) |
| Make the setting for sending the monitor image attached to an e-mail. | e-Mail (SMTP) Menu (page 49) |
| Set the user access right for the camera. | User Menu (page 47) |

The Operating the Camera section explains how to monitor the image from the camera using your Web browser. Use Internet Explorer as the Web browser. The functions of the camera should be set by the Administrator. For the setting of the camera, see “Administrating the Camera” on page 26.

# Administrator and User

This network camera identifies the people who log in as the **Administrator** or **User**.
The **Administrator** can use all the functions of this network camera including camera setting. The **User** can use the functions for monitoring the image and audio from the camera, and controlling the camera. The **Viewer mode** setting is used to restrict the user's access rights. There are three types of users.

Each type of user can use the corresponding functions below.

| Function | Administrator | User | | |
|---|---|---|---|---|
| | | Full | Light | View |
| Monitor a live image | ● | ● | ● | ● |
| View the date and time | ● | ● | ● | ● |
| Control the frame rate (Available in JPEG mode only) | ● | ● | – | – |
| Control the image view size | ● | ● | ● | – |
| Zoom an image using the digital zoom | ● | ● | ● | – |
| Save a still image in the computer | ● | ● | ● | – 1) |
| Send an image file to the FTP server | ● | ● | – | – |
| Send an image attached to an e-mail | ● | ● | – | – |
| Record an image in the memory | ● | ● | – | – |
| Control the alarm output of the I/O port on the camera | ● | ● | – | – |
| Switch the Day/Night function mode (available on SNC-DF85/DF80 only) | ● | ● | – | – |
| Play an audio file (Voice alert) | ● | ● | – | – |
| Switch the TCP/UDP transmission mode (Available in MPEG4/H.264 mode only) | ● 2) | ● 2) | – | – |
| Receive the audio | ● | ● | ● | ● |
| Control the setting menu | ● | – | – | – |

● Usable function
– Not usable function

1) This function is usable with the Java applet viewer.
2) This function is not usable with the Java applet viewer.

The access rights of the administrator and the user can be set in “Setting the User — User Menu” of the Administrator menu on page 47.

# Logging in to Homepage — Welcome Page

## Logging in as a user

**1** Start the Web browser on your computer and type the IP address of the camera you want to monitor.

The welcome page is displayed.

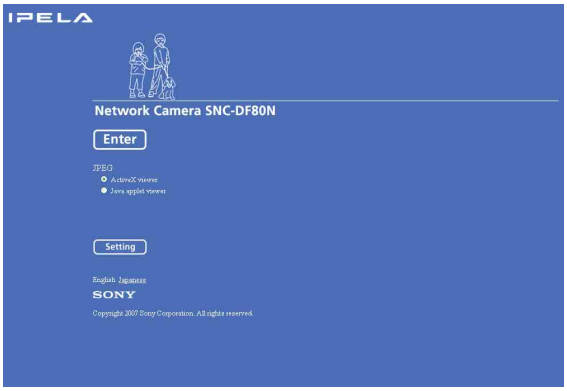
Display sample: SNC-DF80N

**2** Select the viewer.
The usable codecs and viewers are displayed depending on the **Mode** setting in the Video codec tab in the Camera menu (page 35).

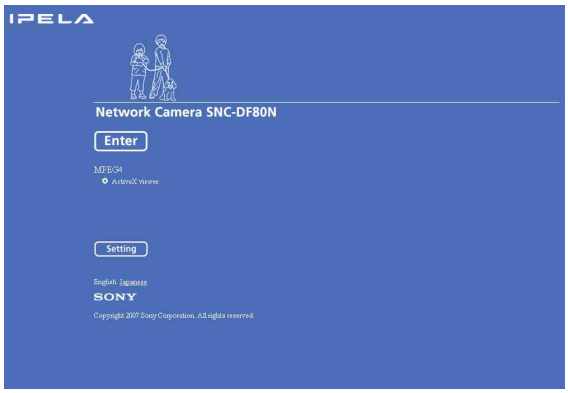
### When Mode is set to Single codec

You can monitor the image of the selected video codec (JPEG, MPEG4 or H.264). For JPEG images, you can select **Java applet viewer**.

**When JPEG is selected**




**When MPEG4 is selected**




**When H.264 is selected**

### When Mode is set to Dual codec

You can monitor JPEG and MPEG4 images. For JPEG images, you can select **Java applet viewer**.

**3** Click **Enter**.
The main viewer appears.

**With the ActiveX viewer (MPEG4/H.264)**

**With the Java applet viewer**

Control the camera from the main viewer.

**Note**

If the welcome page does not start correctly, the security level of the Internet Explorer may be set to higher than **Medium**. See “To display the welcome page and the main viewer correctly” on page 14 and check the security level.

## Displaying the Administrator menu directly

When the administrator sets the camera functions, the Administrator menu can be opened directly from the welcome page.

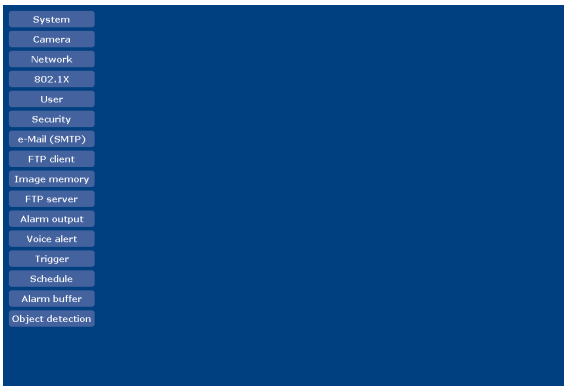
**1** Select the viewer language on the welcome page. Click **English** or **Japanese** at the bottom of the welcome page.

**2** Click **Setting** on the welcome page. The following dialog appears.

**3** Enter the user name and password for Administrator, then click **OK**.

The user name “admin” and the password “admin” are set at the factory for the Administrator. You can change them using the User menu of the Administrator menu (see page 47).

The Administrator menu appears in another window.




## About viewers

You can use the following viewers.

### ActiveX viewer

This viewer can monitor the camera image in any of the **JPEG**, **MPEG4** and **H.264** video codecs.
You must install this viewer when you access the main viewer for the first time.

#### When you display the main viewer of the camera for the first time

When you log in the network camera using ActiveX viewer for the first time (by clicking **Enter** to enter the main viewer), the Security Warning appears. Click **Yes** and install ActiveX Control. You can use all the functions of the viewer with ActiveX Control.

### Java applet viewer

You can select this viewer when the camera image is in **JPEG**. The frame rate is lower than the ActiveX viewer. The Java applet viewer operates only when Java is installed and Java (Sun) is enabled. If it does not operate correctly, check whether the Java has been installed successfully and Java (Sun) is enabled.

For the verified Java version, contact your authorized Sony dealer.

### To check the Java version

Select **Tools** from the menu bar of Internet Explorer, then select **Internet Options** and click the **Advanced mode** tab. Check the version of Java displayed in **Java (Sun)**. If **Java (Sun)** is not displayed, it means that Java is not installed. You need to install Java.

### To enable Java Plug-in

Example: In case of Java Plug-in Ver. 1.6.0_01

Check “Use JRE 1.6.0_01 <applet> (requires restart)” in “Java (Sun)”.

### To install Java Plug-in

Download Java 2 Runtime Environment, Standard Edition (JRE) from the website of Sun Microsystems, Inc., and install it by following the instructions on the installer.

**Notes**

- If **Automatic configuration** is enabled in the Local Area Network (LAN) Settings of Internet Explorer, the camera image may not be displayed. In that case, disable **Automatic configuration** and set the Proxy server manually. For the setting of the Proxy server, consult your network administrator.
- When you install ActiveX Control, you should be logged in to the computer as the Administrator.

**Tip**

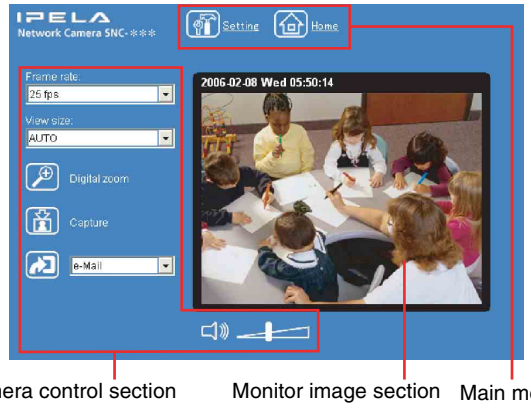
Every page of this software is optimized for display character size **Medium** for Internet Explorer.

# Configuration of Main Viewer

This section explains the functions of the parts and controls of the main viewer. For a detailed explanation on each part or control, see the specified pages.

### Main viewer using ActiveX viewer (MPEG4 or H.264)

### Main viewer using ActiveX viewer (JPEG)




### Main viewer using Java applet viewer

## Main menu

### Setting

Click to display the Administrator menu. (page 26)
You can operate this function only when logging in as the administrator.

### Home

Displays the welcome page.

## Camera control section

### Frame rate

(Displayed only when the camera image is in **JPEG**.)

Selects the frame rate to transmit images. (page 21)

### View size

Selects the view size to be displayed. (page 22)

### Digital zoom

Click to change the size of the digital zoom. (page 22)

### Capture

(Displayed in the main menu when the Java applet viewer is used.)

Click to capture a still image shot by the camera and to store it in the computer. (page 22)

### Trigger

(Displayed only when, the camera **Viewer mode** (page 48) is set to **Full** and one or more triggers are enabled in the Trigger menu (page 61).)

Select the function you want to use from the drop-down list and click . The selected function is activated.
The selectable functions are as follows:
– send the still image files attached to an e-mail (page 23)
– send the still image files to an FTP server (page 23)
– record the still image files (page 23)
– control the alarm output (page 24)
– switch the Day/Night function on/off (SNC-DF85/DF80 only) (page 24)
– play the audio file stored in the camera (page 24)

### Transmission (TCP/UDP transmission mode)

(Displayed only when the camera image is in MPEG4 or H.264 and the ActiveX viewer is used.)

Each click switches the transmission mode of the video/audio data between TCP mode, UDP (Unicast) mode, and UDP (Multicast) mode. (page 25)
The last selected mode is saved in the computer, and will stay selected for the next startup.

### Volume

(Displayed when **Microphone** (page 32) is set to **On**.)

Drag the bar to adjust the volume.
When you click , the icon changes to and the audio output stops. To output the audio, click again.

**Note**

If does not appear when the Java applet viewer is used, **Audio codec** may not be set to **G.711 (64 kbps)** (page 32), or Java may not be installed correctly. To check if Java is installed correctly, refer to “Java applet viewer” of “About viewers” on page 18.

## Monitor Image

The image shot by the camera is shown here. The date and time is displayed at the top of the window.

# Controlling the Monitor Image

You can monitor the camera image on the monitor window of the main viewer.

## Monitoring the camera image

**1** Log in to the homepage to display the main viewer. To log in, see “Logging in as a user” on page 17.

**2** Select the frame rate (only when the camera image is in **JPEG**).

Click the Frame rate list box to select the frame rate for transmitting the image. Selectable frame rates are as follows.

**SNC-DF85N/DF80N/DF50N**
1, 2, 3, 4, 5, 6, 8, 10, 15, 20, 25, 30 fps

**SNC-DF85P/DF80P/DF50P**
1, 2, 3, 4, 5, 6, 8, 12, 16, 20, 25 fps

“fps” is a unit indicating the number of frames transmitted per second.
For example, if you select **30 fps**, the image is sent at the maximum speed of the connected line (30 fps maximum).

**Note**

The frame rate options indicate the maximum number of frames that can be transmitted.
The number of frames actually transmitted may vary depending on network environments and

camera settings (image size and image quality settings).

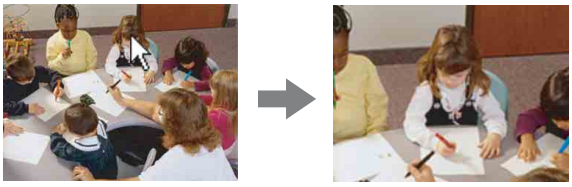
**3** Select the view size.

Click **View size** list box to select the view size from **Auto**, **640 × 480**, **320 × 240**, or **160 × 120**.
**Auto** is determined by the image size specified in the Camera menu (page 32).

## Zooming in the monitor image

**1** Click .

**2** Click the point you want to zoom in.
The image is magnified by about 1.5 times with the clicked point at the center.



The digital zoom icon changes to .

**3** To cancel zooming in, click .

# Capturing a Monitor Image

You can capture an image being monitored as a still image and save it in the computer.

## Capturing a monitor image

**1** Display the camera image in the monitor window.

**2** Click .
The still image of the moment you click is captured, and this still image is displayed in the capture window.

**With the ActiveX viewer**

**With the Java applet viewer**

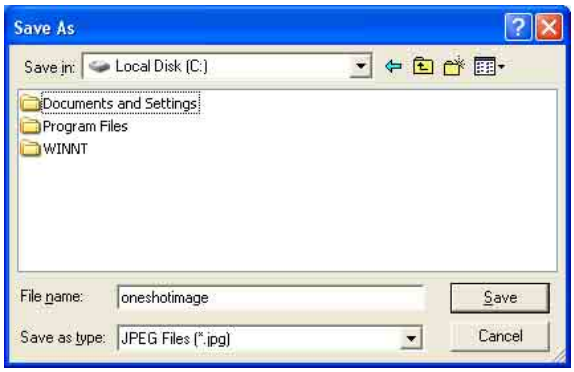
3 To close the capture window, click **Cancel** or **Close**.

## Saving the captured image

### With the ActiveX viewer

1 Capture the monitor image.

2 Click **Save**.
The **Save As** dialog appears.



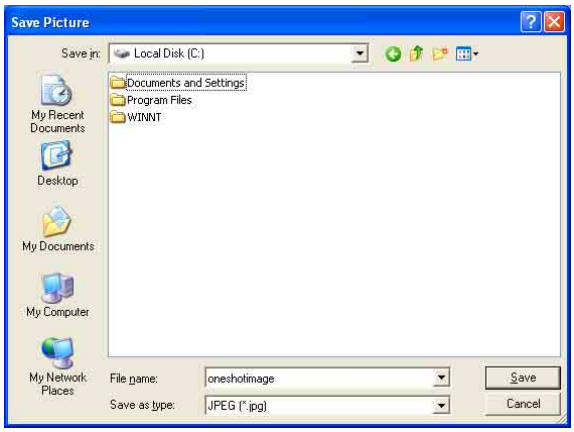

3 Select **JPEG Files** or **Windows Bitmap Files** as **Save as type**.

4 Type the **File name** and specify **Save in**, then click **Save**.

### With the Java applet viewer

1 Capture the monitor image.

2 Right-click the mouse to display the menu and select **Save Picture As...**.
The **Save Picture** dialog appears.




3 Select **JPEG** or **Bit map** as **Save as type**.

4 Type in **File name** and specify **Save in**, then click **Save**.

# Using the Trigger Button

You can operate various functions of the camera simply by clicking (trigger) in the main viewer.

## Sending a monitor image via e-mail

You can send a captured still image by attaching it to an e-mail.
To use this function, you need to make **e-Mail (SMTP)** active and set the address in the Trigger menu of the Administrator menu properly (page 61).

1 Display the image on the monitor window.

2 Select **e-Mail** from the trigger drop-down list.

3 Click .
The still image of the moment you click is captured, and your e-mail with the image file attached is sent to the specified mail address.

## Sending a monitor image to an FTP server

You can send a captured still image to the FTP server.
To use this function, you need to make **FTP client** active and set the address in the Trigger menu of the Administrator menu properly (page 62).

1 Display the image on the monitor window.

2 Select **FTP** from the trigger drop-down list.

3 Click .
The still image of the moment you click is captured, and the image file is sent to the FTP server.

## Recording a camera image as a still image

You can capture a camera image as a still picture and record it.
The still images are recorded in the built-in memory for the SNC-DF50, or either in the built-in memory or the

CF memory card (not supplied) for the SNC-DF85/DF80.
To use this function, you need to make **Image memory** active and set the details in the Trigger menu of the Administrator menu (page 62).

1 Display the image on the monitor window.

2 Select **Image memory** from the trigger drop-down list.

3 Click .
The still image of the moment you click is captured, and the image file is recorded.

## Controlling alarm output 1, 2

You can control Alarm output 1, 2.
To use this function, you need to make **Alarm output 1** or **Alarm output 2** active in the Trigger menu of the Administrator menu (page 62).

1 Display the image on the monitor window.

2 Select **Alarm output1** or **Alarm output2** from the trigger drop-down list.

3 Click .
The alarm output is switched by clicking.
The alarm output mode can be selected from **Toggle** or **Timer** of **Alarm output 1, 2** in the Trigger menu (page 62).

**Tip**

For the connection of peripheral devices to the alarm output of the I/O port, see the supplied Installation Manual.

## Controlling Day/Night function (SNC-DF85/DF80 only)

You can control the Day/Night function On (night mode) and Off (day mode).
To use this function, you need to make **Day/Night** active in the Trigger menu of the Administrator menu (page 62).

1 Display the image on the monitor window.

2 Select **Day/Night** from the trigger drop-down list.

3 Click .
Each click switches the Day/Night function alternately between On (night mode) and Off (day mode).

**Note**

If **Day/Night mode** in the Trigger-Day/Night menu (page 62) is set to **Disable** or **Auto**, you cannot control the Day/Night function by clicking .

## Playing the audio file stored in the camera

You can play the audio file previously stored in the camera using the SNC audio upload tool.
To use this function, you need to make **Voice alert1**, **Voice alert2** and **Voice alert3** active in the Trigger menu of the Administrator menu (page 63).

1 Display the image on the monitor window.

2 Select **Voice alert1**, **Voice alert2** or **Voice alert3** from the trigger drop-down list.

3 Click .
Playback of the selected audio file starts and the playback sound is output from the speaker connected to the camera.

# Switching TCP/UDP Transmission Mode

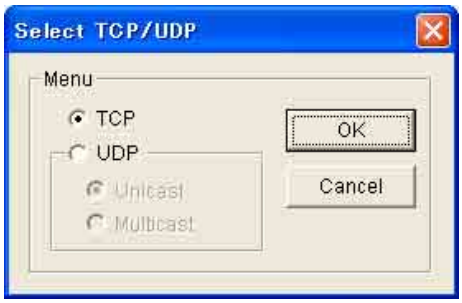
You can select TCP or UDP as the communication port for the video/audio data.
This function can be used when **Mode** (video codec mode) (page 35) is set to **MPEG4** or **H.264** and the ActiveX viewer is used.

**Notes**

- The function may not operate correctly when you use personal firewall software or antivirus software on your computer. In that case, disable the software or select the TCP mode.
- If you are using Windows XP Service Pack 2 or Windows Vista, disable "Windows Firewall." For details, see "Configuring Windows Firewall" in "When using Windows XP Service Pack 2" on page 10 or "Configuring Windows Firewall" in "When using Windows Vista" on page 12.

**1** Open the main viewer.

**2** Click **TCP/UDP Transmission**.
The **Select TCP/UDP** dialog appears.




**3** Click one of the buttons **TCP, UDP (Unicast)** or **UDP (Multicast)**.

**TCP:** This is normally selected.
When **TCP** is selected as the communication port, HTTP communication is adopted for video/audio communications.
HTTP is the protocol used for reading the usual Web page.
In an environment capable of reading Web pages, you can watch or listen to the video/audio by selecting the TCP port.

**UDP (Unicast):** When **UDP (Unicast)** is selected as the communication port, RTP (Real-time Transport Protocol) is adopted for video/audio communications. Since RTP is the protocol for running video/audio data, the video/audio playback is smoother than when TCP (HTTP) is selected. If a firewall is installed between the camera and the computer, or depending on the network environment, the video/audio may not play back properly when **UDP (Unicast)** is selected. In that case, select **TCP**.

**UDP (Multicast):** This protocol is selectable when **Multicast streaming** (page 37) is **On**. When **UDP (Multicast)** is selected as the transmission port, RTP (Real-time Transport Protocol) and UDP multicast techniques are adopted for video/audio transmission. By selecting it, the network transmission load of the camera can be reduced. If a router that does not correspond to the multicast or a firewall is installed between the camera and the computer, the video/audio may not play back properly. In that case, select **TCP** or **UDP (Unicast)**.

**4** Click **OK** to close the dialog.

If you do not change the transmission setting, click **Cancel**.

# Administrating the Camera

The Administrating the Camera section explains how to set the functions of the camera by the Administrator. For the monitoring of the camera image, see “Operating the Camera” on page 16.

This section explains the basic operations and each option of the Administrator menu.

### Note on the display of menu options

The setting menus of this unit will clearly display only the setting options that you can currently select. The grayed out options cannot be selected.



# Basic Operations of Administrator Menu

You can use the Administrator menu to set all functions to suit the user's needs.
Click **Setting** in the welcome page or in the main viewer to display the Administrator menu.

## How to setup the Administrator menu

**1** Log in the homepage to display the welcome page.
You can learn how to log in on page 17 “Logging in as a user”.

**2** Select the viewer language on the welcome page.
Click **English** or **Japanese** at the bottom of the welcome page.

**3** Click **Setting** on the welcome page.
The authentication dialog appears. Enter the user name and password for Administrator.
The user name “admin” and password “admin” are set at the factory for the Administrator.
Administrator menu appears.

The following steps also display the Administrator menu.

① Click **Enter** in the welcome page to display the main viewer.

② Click in the main viewer.

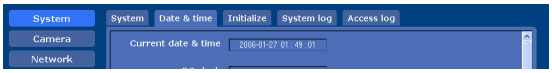
③ Enter the user name and password for Administrator.

**4** Click the menu name (example: System) on the left side of the Administrator menu.
The clicked menu appears.

Example: “System” menu

**5** Select the required tab above the menu, and set each setting option in the tab.

Example: “Date & time” tab of “System” menu



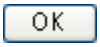

See pages 28 to 71 for details of the menu tabs and setting options.

**6** After setting, click **OK**.
The settings you have made become active.

Click **Cancel** to invalidate the set values and return to the previous settings.

### Buttons common to every menu

The following buttons are displayed on all the menus. The functions of the buttons are the same on every menu.




Click this button to validate the settings.

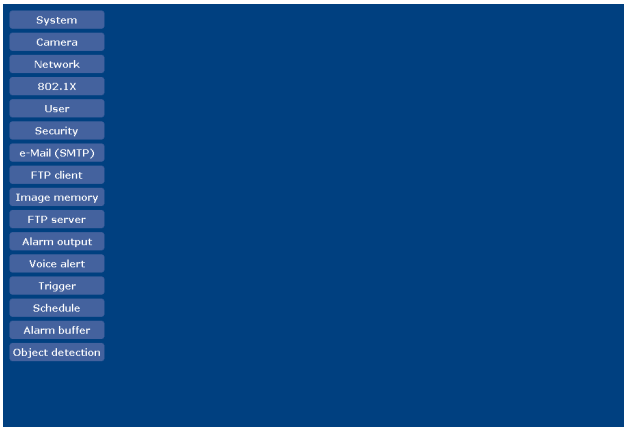
Cancel

Click this button to invalidate the set values and return to the previous settings.

### General notes on menus

- After changing a setting on a menu, wait at least 10 seconds before turning off the power of the camera. If the power is turned off immediately, the changed setting may not be stored correctly.
- When the camera settings are changed while watching the main viewer, some settings cannot be restored. To reflect the change on the opening main viewer, click **Refresh** of the Web browser.

## Configuration of Administrator menu




**System**
Displays the System menu. (“Configuring the System — System Menu” on page 28)

**Camera**
Displays the Camera menu for setting the camera image and audio. (“Setting the Camera Image and Audio — Camera Menu” on page 32)

**Network**
Displays the Network menu for setting the network connection. (“Configuring the Network — Network Menu” on page 38)

**802.1X**
Displays the 802.1X menu for connecting the camera to the network configured in compliance with the 802.1X standard for port authentication. (“Using the 802.1X Authentication Function — 802.1X Menu” on page 41)

**User**
Displays the User menu for setting the log in user name and password. (“Setting the User — User Menu” on page 47)

**Security**
Displays the Security menu for specifying a computer that is allowed to connect to the camera. (“Setting the Security — Security Menu” on page 48)

**e-Mail (SMTP)**
Displays the e-Mail (SMTP) menu for sending an e-mail. (“Sending an Image via E-mail — e-Mail (SMTP) Menu” on page 49)

**FTP client**
Displays the FTP client menu for sending an image/audio file, etc. to an FTP server. (“Sending Images to FTP Server — FTP client Menu” on page 52)

**Image memory**
Displays the Image memory menu for recording an image/audio file, etc. (“Recording Images in Memory — Image memory Menu” on page 54)

**FTP server**
Displays the FTP server menu for setting the FTP server function of the camera. (“Downloading Images from the Camera — FTP server Menu” on page 58)

**Alarm output**
Displays the Alarm output menu for setting the alarm out terminal of the camera. (“Setting the Alarm Output — Alarm output Menu” on page 59)

**Voice alert**
Displays the Voice alert menu for playing the audio file stored in the camera in synchronization with alarm detection by the sensor input or the object detection function. (“Outputting Audio Linked to Alarm Detection — Voice alert Menu” on page 60)

**Trigger**
Displays the Trigger menu for operations when you click the trigger button in the main viewer. (“Setting the Operations from the Viewer — Trigger Menu” on page 61)

**Schedule**
Displays the Schedule menu for the Day/Night function (SNC-DF85/DF80 only), e-Mail (SMTP) function, FTP client function, Image memory function and Alarm out function, Voice alert function and so on. (“Setting the Schedule — Schedule Menu” on page 63)

**Alarm buffer**
Displays the Alarm buffer menu for the buffer that records the image and audio related to alarm detection. (“Setting the Alarm Buffer — Alarm buffer Menu” on page 64)

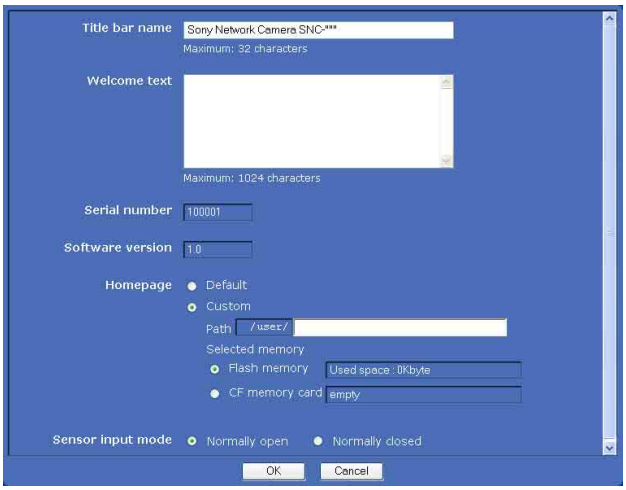
**Object detection**
Displays the Object detection menu for the object detection function built into the camera. (“Setting the

Object Detection Function — Object detection Menu” on page 65)

# Configuring the System — System Menu

When you click System in the Administrator menu, the System menu appears.
Use this menu to perform the principal settings of the software.
The System menu has five tabs: **System**, **Date & time**, **Initialize**, **System log** and **Access log**.

## System Tab




### Title bar name

Type a name of up to 32 characters to be displayed on the title bar. The characters typed here are displayed on the title bar of the Web browser.

### Welcome text

Type any text of up to 1024 characters in HTML format to show on the welcome page. Use the <BR> tag for a line break. (A line break is equivalent to 2 characters.)

### Serial number

The serial number of the camera is displayed.

### Software version

The software version of this camera is displayed.

### Homepage

Select the homepage to be displayed when you enter the camera IP address in your browser’s web address box.

**Default:** Displays the homepage stored in the camera.
**Custom:** Displays your individual homepage.
You can display your favorite homepage stored in the built-in flash memory or CF memory card (for SNC-DF85/DF80 only, not supplied).

To store the HTML file of the homepage in the built-in flash memory, use the Custom Homepage Installer included in the supplied CD-ROM.
To learn how to use of the Custom Homepage Installer, see page 83.
For the verified cards, contact your authorized Sony dealer.

To display your individual homepage, perform the following operation:

**1** Select **Custom**.

**2** Type the path of the HTML file using up to 64 characters in the text box on the right of **Path**.
For the SNC-DF85/DF80, select the memory in which the homepage is stored.
You can select **Flash memory** or **CF memory card**.

The directory displayed in the text box on the right of **Path** changes according to the selected memory.

**Tip**

Even when you select **Custom**, the homepage inside the camera can be displayed by typing the following URL in the address box of your Web browser.

Example: When the IP address of the camera is set to 192.168.0.100
http://192.168.0.100/en/index.html

### Sensor input mode

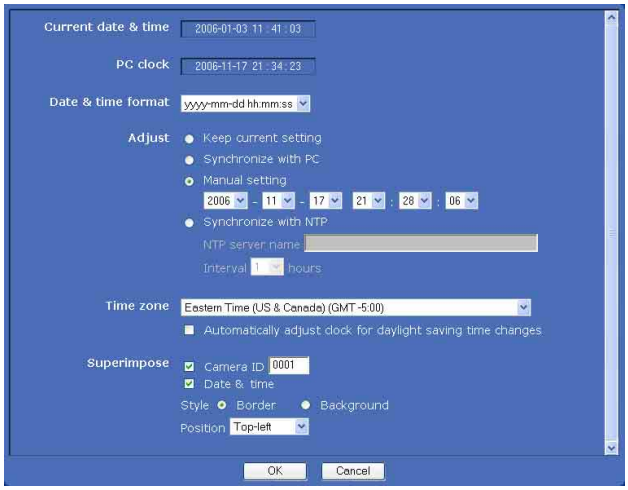
Specify the detection mode of the signal input to the sensor input terminal of the camera.

**Normally open:** Detects alarm when the sensor input is short-circuited.
**Normally closed:** Detects alarm when the sensor input is open-circuited.

### OK/Cancel

See “Buttons common to every menu” on page 26.

## Date & time Tab




### Current date & time

Displays the date and time set on the camera.

**Note**

After you have purchased the camera, be sure to check the date and time of the camera and set them if necessary.

### PC clock

Displays the date and time set on your computer.

### Date & time format

Select the format of date and time to be displayed in the main viewer from the drop-down list.
You can select the format between **yyyy-mm-dd hh:mm:ss** (year-month-day hour:minute:second), **mm-dd-yyyy hh:mm:ss** (month-day-year hour:minute:second), and **dd-mm-yyyy hh:mm:ss** (day-month-year hour:minute:second).

### Adjust

Select how to set the day and time.

**Keep current setting:** Select if you do not need to set the date and time.
**Synchronize with PC:** Select if you want to synchronize the camera’s date and time with those of the computer.
**Manual setting:** Select if you want to set the camera’s date and time manually.
Select the year, month, date, hour, minutes and seconds from each drop-down list.
**Synchronize with NTP:** Select if you want to synchronize the camera’s date and time with those of the time server called NTP server (Network Time Protocol). Set the **NTP server name** and the **Interval**.

### NTP server name
Type the host name or IP address of the NTP server, using up to 64 characters.

### Interval
Select an interval between **1** and **24** hours at which you want to adjust the camera's time referring to the NTP server's time. The set interval is a guide, and does not indicate the exact time.

**Note**

The setting time may not match with the exact time according to the network environment.

## Time zone
Set the time difference from Greenwich Mean Time in the area where the camera is installed.
Select the time zone in the area where the camera is installed from the drop-down list.

### Automatically adjust clock for daylight saving time changes
When you select it, the clock is automatically adjusted according to the daylight saving time of the selected time zone.

**Note**

If the time zone selected in **Time zone** is different from that set on the computer, the time is adjusted using the time zone difference and set on the camera.

## Superimpose
Select whether to superimpose the camera ID and/or date & time on the image or not.
The camera ID and/or date & time are also superimposed on images recorded by the Pre-alarm or Post-alarm function.

### Camera ID
Checking this box allows you to superimpose the camera ID. Enter a four-digit number for the camera ID.

### Date & Time
Checking this box allows you to superimpose the date and time.

### Style
Select the style of the superimposed item between **Border** and **Background**.

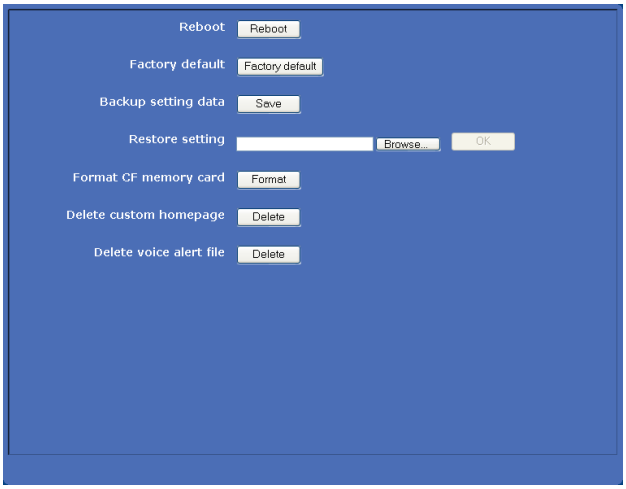
### Position
Select the position of the superimposed item from among **Top-left**, **Top-right**, **Bottom-left** and **Bottom-right**

**Notes**

- The superimposed camera ID and/or date & time area is regarded as an inactive area of the object detection function.
- A pale image may be viewed under the background of the superimposed area.
- The size of the superimposed number is reduced if the image size is set to **384 × 288** or **320 × 240 (QVGA)**.
- The superimposed number is not readable if the image size is set to **160 × 120 (QQVGA)**.
- When you have changed the **Date & Time** setting, click **Refresh** of the Web browser to reflect the change on the opening main viewer.

## OK/Cancel
See "Buttons common to every menu" on page 26.

# Initialize Tab




## Reboot
Reboots the camera.
Click **Reboot**, and the message "This Camera will be rebooted. Are you sure?" appears. Click **OK** to reboot the camera. It takes about two minutes to start again.

## Factory default
Resets the camera to the factory settings.
Click **Factory default**, and the message "Setup data will be initialized. Are you sure?" appears. When you click **OK**, the network indicator on the camera starts to blink. After adjustments of the default settings have finished, the camera reboots automatically. Do not turn off the camera until the camera reboots.

**Tip**

The camera can also be reset to the factory settings by turning on the power of this unit while pressing the reset

switch on the camera. For details, see the supplied Installation Manual.

### Backup setting data

Saves the setting data of the camera in a file.
Click **Save**, and follow the instructions on the Web browser to specify the folder and save the setting data of the camera.
The file name preset at the factory is “snc-df85.cfg” for the SNC-DF85, “ snc-df80.cfg” for the SNC-DF80, or “snc-df50.cfg” for the SNC-DF50.

### Restore setting

Loads the stored setting data of the camera.
Click **Browse** and select the file in which the setting data is stored. Then, click **OK**, and the camera is adjusted according to the loaded data and restarted.

**Notes**

- With **Restore setting**, some items in the Network menu (page 38) cannot be restored.
- The following items cannot be stored or restored with **Backup setting data** or **Restore setting**.
  – audio files uploaded using SNC audio upload tool
  – a homepage created using Custom Homepage Installer
  – a client certificate and CA certificate to be used in the 802.1X authentication function

### Format CF memory card (SNC-DF85/DF80 only)

Click **Format** to format the CF memory card (not supplied) inserted into the CF card slot of the camera. The files and folders stored in the CF memory card are deleted while formatting.

**Notes**

- Before formatting, disable the image memory function and the FTP server function to protect the CF memory card against writing.
- Do not activate the **Format CF memory card** function when no card is inserted into the CF card slot.

### Delete custom homepage

By pressing **Delete**, you can delete the homepage recorded in the flash memory of the camera with Custom Homepage Installer (page 83).

### Delete voice alert file

Click **Delete** to delete all the audio files stored in the camera using SNC audio upload tool (page 74).

**Notes**

- Clicking **Delete** deletes all the stored audio files simultaneously. To delete a specified audio file only, perform deletion of the audio file in the corresponding Voice alert tab of the Voice alert menu (page 60).
- Before deleting the audio file, set **Voice alert** to **Off** in each tab of the Voice alert menu (page 61).

## System log Tab

The data of the software activity of the camera is recorded in this log. It includes data that is useful when a problem occurs.
Click **Reload** to reload the latest data.

## Access log tab

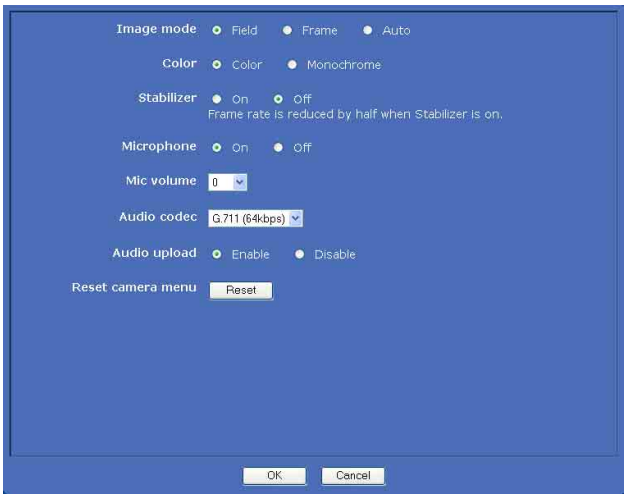
The access record of the camera is displayed.
Click **Reload** to reload the latest data.

# Setting the Camera Image and Audio
## — Camera Menu

When you click Camera in the Administrator menu, the Camera menu appears.
Use this menu to set the functions of the camera.
The Camera menu consists of the following tabs:
**SNC-DF85/DF80: Common**, **Picture**, **Day/Night**, **Video codec** and **Streaming**
**SNC-DF50: Common**, **Picture**, **Video codec** and **Streaming**



## Common Tab




### Image mode

Selects the mode of the image output from the camera.

**Field:** Select this option when shooting a moving image.
**Frame:** Select this option when shooting a still image. With this setting, the vertical resolution increases but the edge of a moving object may be jagged.
**Auto:** The **Frame** or **Field** mode process is automatically performed depending on movement in the image. **Frame** is performed for an area without movement, and **Field** is performed for an area with movement.

### Color

Select **Color** or **Monochrome** for the image.

### Stabilizer

Select the stabilizer to compensate for oscillation. Select **On** to activate the stabilizer when the camera is affected by oscillation.

**Notes**

- The stabilizer is effective for the images on a computer. They are not effective for the video output.
- The view angle of the camera is reduced by approximately 10 % when **Stabilizer** is set to **On**.
- The frame rate lowers half when **Stabilizer** is set to **On**.
- The stabilizer may not be effective depending on the degree of oscillation.
- If a flat object such as a solid wall or floor occupies the greater part of a shooting scene or if a large object occupying the greater part of the scene passes by or continues moving, the whole image may tremble. In this case, set **Stabilizer** to **Off**.
- When the brightness of the scene changes suddenly or when you change the brightness setting, the whole image may tremble momentarily.

### Microphone

Select whether you are going to send the audio from the microphone input connector. Select **On** to send the audio from this network camera.

**Note**

When you change the **Microphone** setting, click **Refresh** on the Web browser to reflect the change when opening the main viewer page.

### Mic volume

Set the volume level of the audio input from the microphone input connector. It is adjustable from **–10** to **+10**.

### Audio codec

Select the bit rate when you send the audio from the microphone input connector. **G.711 (64kbps)**, **G.726 (40kbps)**, **G.726 (32kbps)**, **G.726 (24kbps)** or **G.726 (16kbps)** can be selected.

**Note**

If the bit rate is set to other than **G.711(64kbps)**, no audio is output when you use the Java applet viewer.

### Audio upload

Using the SNC audio upload tool stored in the supplied CD-ROM, you can output the audio that is input to the computer's audio input terminal from the speaker connected to the line output jack of the camera.
Select **Enable** to output the audio from the speaker.

### Reset camera menu

Click **Reset**, and the message “Camera menu setting is reset to default. Are you sure?” is displayed. To reset to default, click **OK**.

### OK/Cancel

See “Buttons common to every menu” on page 26.

## Picture Tab

You can set the color condition, exposure, etc. of the camera.

#### SNC-DF85/DF50

#### SNC-DF80

### White balance

Select the white balance mode.

**ATW:** Makes the subject lighter and automatically adjusts to re-create the original color. (approximately 2000 K to 10000 K)

**ATW-PRO:** Automatically adjusts the color to be closest to the image you are viewing. (approximately 2500 K to 6500 K)

**Dual WB: (SNC-DF85/DF50 only)**
Automatically adjusts the color aimed at low to middle brightness objects (approximately 2000 K to 10000 K)

**Note**

For the SNC-DF85/DF50, when **DynaView** in **Exposure** is set to **On**, the white balance mode is fixed to **Dual WB** and other modes cannot be selected.

### Exposure

Select the exposure of the camera.

#### Auto gain control

When you select **On**, the sensitivity is automatically adjusted according to the brightness of the object.

#### DynaView (SNC-DF85/DF50 only)

The DynaView function reduces white-out and black-out in high-contrast shooting scenes such as under backlighting. When you select **On**, the DynaView function starts to work.

#### Backlight compensation (SNC-DF80 only)

When you select **On**, the backlight compensation with center-weighted metering starts to work.

**Note**

When **DynaView** or **Backlight compensation** is set to **On**, a hunting may be generated due to a picture. In this case, set it to **Off**.

#### Exposure compensation (SNC-DF85/DF50 only)

The exposure compensation function adjusts the brightness of the image by compensating the exposure. You can select the exposure compensation values from the drop-down list.
Selectable EV values are as follows:
+1, +0.6, +0.3, 0, -0.3, -0.6, -1 (EV)

#### Shutter speed

Select the shutter speed of the camera from the drop-down list.
Selectable values of the shutter speed are as follows:

**SNC-DF85N/DF80N/DF50N:** 1/10000, 1/4000, 1/2000, 1/1000, 1/500, 1/250, 1/100, 1/60 (sec.)
**SNC-DF85P/DF80P/DF50P:** 1/10000, 1/4000, 1/2000, 1/1000, 1/500, 1/250, 1/120, 1/50 (sec.)

**Tip**

Flickers of fluorescent light can be reduced when **Shutter speed** is set to **1/100** (for NTSC) or **1/120** (for PAL).

### Brightness (SNC-DF80 only)

Perform fine brightness adjustment.
Select the brightness from **-5** to **+5**. Selecting a higher value makes the image brighter, and selecting a lower value makes it darker.

### Saturation

Select the saturation in 7 steps, from **–3** to **+3**.
Selecting **+3** provides the image with the highest saturation.

### Sharpness (SNC-DF85/DF50 only)

Select the sharpness from **Sharp**, **Normal** or **Soft**.

### Contrast

Select the contrast in 7 steps, from **-3** to **+3**.
Selecting **+3** provides the image with the highest contrast.

**Note**

Brightness, saturation and contrast are effective for the computer image only. They are not effective for the video output.

### User preset

You can save the present settings in the camera as custom settings, or you can load the settings saved in the camera.
This function is useful when you temporarily change the settings for the image or reset them to the previous settings.

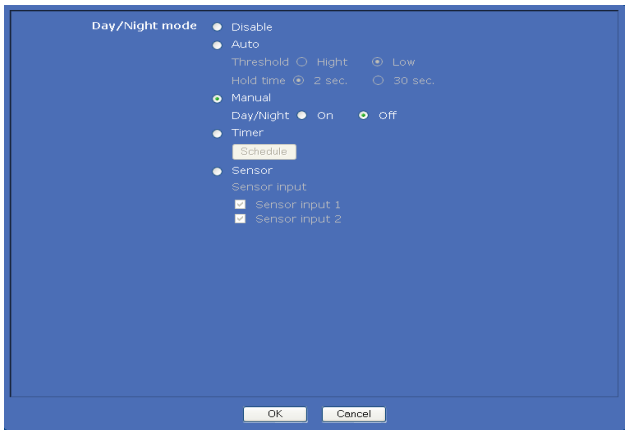
**Save:** Click to save the present settings of the Picture tab.
**Load:** Click to load the saved settings. To use them, click **OK**.

### OK/Cancel

See “Buttons common to every menu” on page 26.

## Day/Night Tab (SNC-DF85/DF80 only)

Use this tab to set the Day/Night function of the camera.




### Day/Night mode

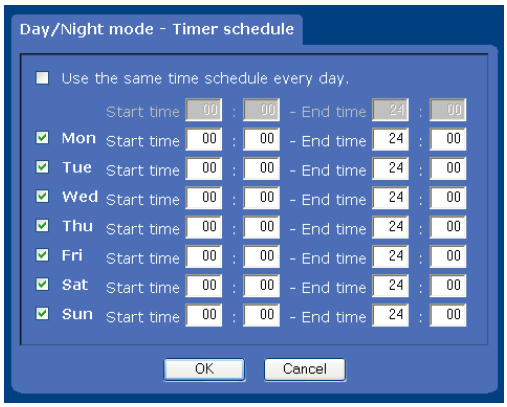
Select the Day/Night mode from among five modes.

**Disable:** Always works in Day mode.
**Auto:** Normally works in Day mode. It switches automatically to Night mode in a dark place.
This mode is effective when **Auto gain control** in **Exposure** is set to **On** in the Picture tab. Switching timing can be set with the following parameters.
**Threshold:**Select **High** or **Low** for the brightness level of the Night mode.
**Hold time:**Select **2 sec.** or **30 sec.** for the time to respond to the change of brightness.

**Notes**

- When Auto gain control is **Off**, it is not switched to Night mode.
- If a light with strong energy shines on the camera when Night mode is selected, hunting may be generated. In this case, select **Sensor input** mode so that Day/Night mode will be switched according to light, or select **Manual** and switch Day/Night mode.

**Manual:** Switch the Day/Night mode manually. When you select **Manual**, **On** and **Off** become active. When you select **On**, the camera works in Night mode. When you select **Off**, it works in Day mode.
**Timer:** Normally the camera works in Day mode. It switches to Night mode at the time that you have you set in the Schedule menu.
Click **Schedule** and the setting menu for the effective period is displayed. (“Setting the Schedule — Schedule Menu” on page 63)


Day/Night mode - Timer schedule
Use the same time schedule every day.
Start time 00 : 00 - End time 24 : 00
Mon Start time 00 : 00 - End time 24 : 00
Tue Start time 00 : 00 - End time 24 : 00
Wed Start time 00 : 00 - End time 24 : 00
Thu Start time 00 : 00 - End time 24 : 00
Fri Start time 00 : 00 - End time 24 : 00
Sat Start time 00 : 00 - End time 24 : 00
Sun Start time 00 : 00 - End time 24 : 00
OK
Cancel

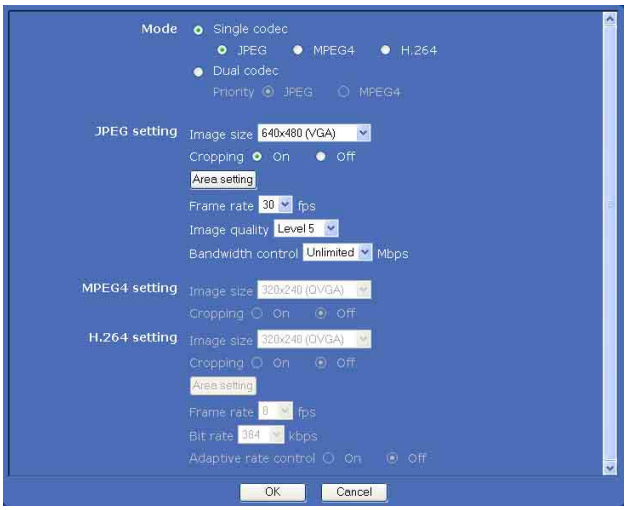
**Sensor input:** Controls the Day/Night mode by synchronizing it with the sensor input.

### OK/Cancel

See “Buttons common to every menu” on page 26.

## Video codec Tab

Use this tab to set the items for the video codec.




### Mode

Select the operation mode of the camera.

**Single codec:** Select one video codec from among **JPEG**, **MPEG4** and **H.264**. The camera supports the selected video codec.

**Dual codec:** The camera supports both JPEG and MPEG4 video codecs simultaneously. When you select this option, select the priority codec **JPEG** or **MPEG4**.

### JPEG setting/MPEG4 setting/H.264 setting

Set the details of the video codecs.

Selectable items become active according to the **Mode** setting. Set the active items in **JPEG setting, MPEG4 setting** or **H.264 setting** as required.

### Image size

You can select the image size to be sent from the camera. **640 × 480 (VGA)**, **384 × 288**, **320 × 240 (QVGA)** or **160 × 120 (QQVGA)** can be selected.
When **640 × 480 (VGA)** is selected and **Cropping** is set to **On**, you can crop a portion of the image and display the cropped image on the computer.

### Cropping

When the image size is set to **640 × 480 (VGA)**, you can crop a portion of the image and display the cropped image on the computer. Cropping reduces the transmitting data size and thus the network load, and a higher frame rate is achieved.

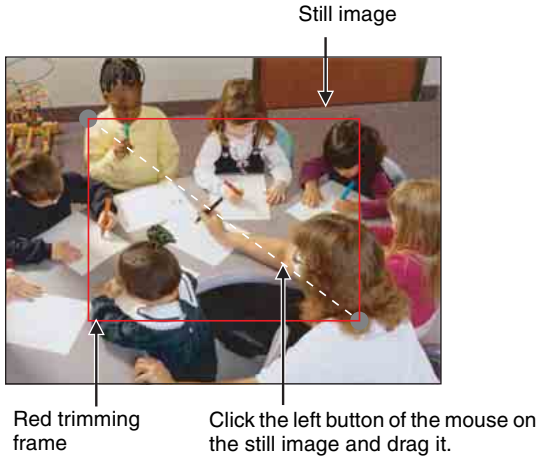
Select **On** to crop the image, or **Off**.

**Note**

Object detection (page 65) operates for an image in the image size that is not cropped even if **Cropping** is set to **On**.

### To crop an image

1. Set the **Image size** to **640 × 480 (VGA)**. **Cropping** becomes active.
2. Set **Cropping** to **On** and click the **Area setting** button.
   The area setting window appears.
3. Specify the cropping area.
   Click the left button of the mouse on the still image and drag it diagonally. The red frame that appears as you drag indicates the cropping area.




4. Click **OK** at the bottom of the window.

The cropped image is displayed on the main viewer.

**5** To close the image, click in the upper-right corner.

### Frame rate

Set the frame rate of the image.
Selectable values of the frame rates are as follows.

**SNC-DF85N/DF80N/DF50N:** 1, 2, 3, 4, 5, 6, 8, 10, 15, 20, 25, 30 (fps)
**SNC-DF85P/DF80P/DF50P:** 1, 2, 3, 4, 5, 6, 8, 12, 16, 20, 25 (fps)

"fps" is a unit indicating the number of frames transmitted per second.

### Image quality (for JPEG only)

Set the quality of JPEG image.
Selectable values are from **Level 1** to **Level 10**.
When **Level 10** is selected, the best image quality is achieved.

### Bandwidth control (for JPEG only)

Limits the network bandwidth for the JPEG image data output from the camera. Selectable bandwidths are as follows:

0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 2.0, 3.0, 4.0 (Mbps), and **Unlimited**

**Note**

Audio may be interrupted depending on the selected bandwidth. In that case, select a wider bandwidth.

### Bit rate (for MPEG4 and H.264 only)

Set the bit rate of MPEG4 or H.264 image transmission for a line.
Selectable values are as follows:

**H.264:** 32, 64, 128, 256, 384, 512, 768, 1024, 1536 (kbps)
**MPEG4:** 64, 128, 256, 384, 512, 768, 1024, 1536, 2048 (kbps)

### Adaptive rate control (for MPEG4 and H.264 only)

This function adjusts the frame rate and the bit rate automatically so that the camera plays back a smooth image to suit the connected computer environment. If **On** is selected, the MPEG4 or H.264 image rate is automatically adjusted.

**Notes**

- The actual frame rate and bit rate may be different according to the image size, the shooting scene, or the network condition.
- When **Adaptive rate control** is set to **On**, the maximum transmission rate will be the values set in **Frame rate** and **Bit rate**.
- When **H.264** is selected and the image size is set to **640 × 480 (VGA)** or **384 × 288**, the frame rate used by the camera to transmit the image will be as follows:
  SNC-DF85N/DF80N/DF50N: 10 fps or less
  SNC-DF85P/DF80P/DF50P: 8 fps or less
- When **MPEG4** is selected, the image size is set to **640 × 480 (VGA)** or **384 × 288** and the frame rate is set to **30 fps**.
  The frame rate may be decreased when the bit rate is more than 512 kbps or while the object detection function is operating.
- When the camera operation mode is set to **Dual codec** and the image size is set to **640 × 480 (VGA)** or **384 × 288** in **MPEG4 setting**, the maximum frame rate at which the camera can transmit data will be 20 fps.
- When the camera operation mode is set to **Dual codec**, the actual values set in **MPEG4 setting** and **JPEG setting** may not be obtained, due to the limitation in the capacity to manage two video codecs simultaneously. Use the following table as a guide for the settings.

#### Capacity to manage two video codecs simultaneously

**SNC-DF85N/DF80N/DF50N**

| JPEG | | MPEG4 | |
|---|---|---|---|
| VGA/384 × 288 | 15 fps | VGA/384 × 288 | 15 fps |
| VGA/384 × 288 | 20 fps | VGA/384 × 288 | 10 fps |
| VGA/384 × 288 | 10 fps | QVGA | 30 fps |
| VGA/384 × 288 | 15 fps | QVGA | 20 fps |
| QVGA | 30 fps | QVGA | 30 fps |

**SNC-DF85P/DF80P/DF50P**

| JPEG | | MPEG4 | |
|---|---|---|---|
| VGA/384 × 288 | 12 fps | VGA/384 × 288 | 12 fps |
| VGA/384 × 288 | 16 fps | VGA/384 × 288 | 8 fps |
| VGA/384 × 288 | 8 fps | QVGA | 25 fps |
| VGA/384 × 288 | 12 fps | QVGA | 16 fps |
| QVGA | 25 fps | QVGA | 25 fps |

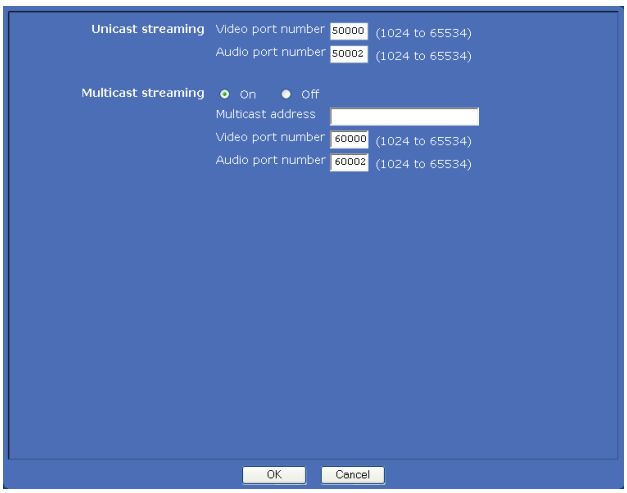
- The object detection function does not operate when **H.264** is selected.
- When **H.264** is selected, you cannot select **Use alarm buffer** in the Alarm sending tab of the FTP client menu and in the Alarm recording tab of the Image memory menu.

## OK/Cancel

See "Buttons common to every menu" on page 26.

## Streaming Tab

Use this tab to set the items for the transmission by unicast or multicast.




### Unicast streaming

Specify the transmission port numbers of the MPEG4 or H.264 video data and audio data to be used when **UDP (Unicast)** is selected with TCP/UDP in the main viewer.

#### Video port number

Specify the transmission port number of the MPEG4 or H.264 video data. It is initially set to 50000. Specify an even number from 1024 to 65534. Two port numbers (the number specified here and an odd number with 1 added to the specified number) are actually used for video data communication and control.

#### Audio port number

Specify the transmission port number of the audio data. It is initially set to 50002. Specify an even number from 1024 to 65534. Two port numbers (the number specified here and an odd number with 1 added to the specified number) are actually used for audio data communication and control.

**Note**

Specify different numbers for the video port number and the audio port number.

### Multicast streaming

Set whether the camera uses multicast streaming for MPEG4/H.264 video data and audio data or not. It reduces the transmission load on the camera by making the computer of the same segment network receive the same transmitting data.
Select **On** to allow and **Off** not to allow multicast sending.
When you select **On**, set **Multicast address**, **Video port number** and **Audio port number** properly.

#### Multicast address

Type the multicast address used on the Multicast streaming.

#### Video port number

Specify the MPEG4 or H.264 video transmission port number used for the Multicast streaming. It is initially set to 60000. Specify an even number from 1024 to 65534. Two port numbers (the number specified here and an odd number with 1 added to the specified number) are actually used for video data communication and control.

#### Audio port number

Specify the audio transmission port number used for the Multicast streaming. It is initially set to 60002. Specify an even number from 1024 to 65534. Two port numbers (the number specified here and an odd number with 1 added to the specified number) are actually used for audio data communication and control.

**Note**

Specify different numbers for the video port number and the audio port number.

### OK/Cancel

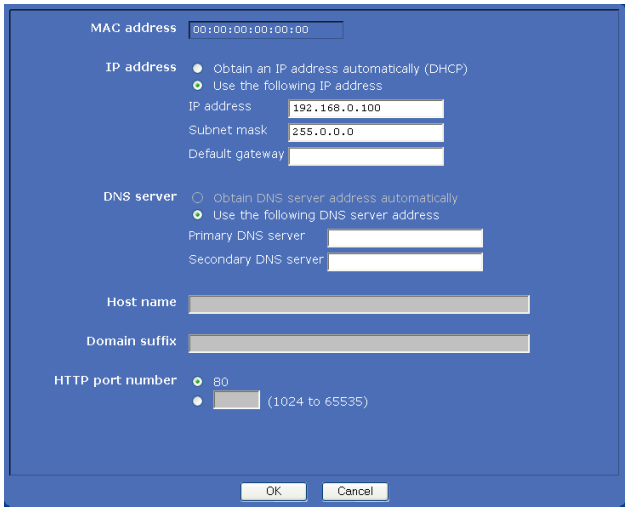
See “Buttons common to every menu” on page 26.

# Configuring the Network — Network Menu

When you click Network in the Administrator menu, the Network menu appears.
Use this menu to configure the network to connect the camera and the computer.
The Network menu consists of two tabs: **Network** and **Dynamic IP address notification**.

## Network Tab

This section provides the menus for connecting the camera through the network cable.




### MAC address

Displays the MAC address of the camera.

### IP address

Configure the IP address.

**Obtain an IP address automatically (DHCP):** Select this option when a DHCP server is installed on the network to allow IP address assignment. With this setting, the IP address is assigned automatically.

**Use the following IP address:** Select this option when you set a fixed IP address. With this setting, specify the **IP address**, **Subnet mask** and **Default gateway** manually.

**Note**

When you select **Obtain an IP address automatically (DHCP)**, make sure that a DHCP server is operating on the network.

#### IP address

Type the IP address of the camera.

#### Subnet mask

Type the subnet mask.

#### Default gateway

Type the default gateway.

### DNS server

Configure the DNS server address.

**Obtain DNS server address automatically:** Select this option to obtain the IP address of DNS server automatically. It can be set only when **Obtain an IP address automatically (DHCP)** is selected in the Network tab.

**Use the following DNS server address:** Select this when you set a fixed address as the IP address of the DNS server. With this setting, specify the addresses on **Primary DNS server** and **Secondary DNS server** manually.

**Note**

When you select **Obtain DNS server address automatically**, make sure that a DHCP server is operating on the network.

#### Primary DNS server

Type the IP address of the primary DNS server.

#### Secondary DNS server

Type the IP address of the secondary DNS server, if necessary.

### Host name

Type the host name of the camera to be transmitted to the DHCP server. This setting is valid only when **Obtain an IP address automatically (DHCP)** is selected in the Network tab.

### Domain suffix

Type the domain suffix of the camera to be transmitted to the DHCP server. This setting is valid only when **Obtain an IP address automatically (DHCP)** is selected in the Network tab.

**Note**

The domain suffix is sent to the DHCP server as FQDN (Fully Qualified Domain Suffix) information when **Host name** is set.

### HTTP port number

Normally select **80**. If you want to use a port number other than 80, select the text box and type a port number between 1024 and 65535.

**Note**

When you have set the **HTTP port numbe**r to a number other than 80 in the Network menu or in the Setup Program, access the camera again by typing the IP address of the camera on your Web browser as follows:

Example: when the HTTP port number is set to 8000

### OK/Cancel

See “Buttons common to every menu” on page 26.

## Dynamic IP address notification Tab — Notifying the IP Address

When **Obtain an IP address automatically (DHCP)** is selected in the Network tab, you can send notification of completion of the network settings using the SMTP or HTTP protocol.

### e-Mail (SMTP) notification

Select **On** to send an e-mail when the DHCP setting is completed.

### SMTP server name

Type the name or IP address of the SMTP server for sending an e-mail, using up to 64 characters.

### Authentication

Select the authentication required when you send an e-mail.

**Off:** Select if no authentication is required when an e-mail is sent.

**On:** Select if authentication is required when an e-mail is sent. Select one of the authentication methods from the following and specify the **POP server name**, **User name** and **Password** as required.

**SMTP:** Select when SMTP authentication is required.

**POP before SMTP:** Select when POP before SMTP authentication is required.

**Note**

When you set **Authentication** to **On**, make sure to select either or both **SMTP** or/and **POP before SMTP**.

### POP server name

It is necessary when **POP before SMTP** is selected for **Authentication**.

Type the POP (receiving mail) server name using up to 64 characters. Or type the IP address of the POP server. This setting is necessary when the SMTP server that sends e-mails performs authentication using the POP user account.

### User name, Password

Type the user name and password of the user who owns the mail account using up to 64 characters. This setting is necessary when the SMTP server that sends e-mails performs authentication.

### Recipient e-mail address

Type the recipient e-mail address using up to 64 characters. You can specify only one recipient e-mail address.

### Administrator e-mail address

Type the e-mail address of the camera administrator using up to 64 characters. This is used as the reply address or the address for a system mail from the mail server.

### Subject

Type the subject/title of the e-mail using up to 64 characters.

### Message

Type the text of the e-mail using up to 384 characters. (A line break is equivalent to 2 characters.) You can describe the information of the acquired IP address, etc. using the special tags mentioned below.

## HTTP notification

Select **On** to output a command to the HTTP server when the DHCP setting is completed. Using this function, you can configure a useful system, for example, to view the access log stored in the HTTP server or start an external CGI program.

## URL

Specify the URL to send HTTP request, using up to 256 characters. The URL is normally written as follows:

http://ip_address[:port]/path?parameter

**ip_address:** Type the IP address or host name of the host to which you want to connect.
**[:port]:** Specify the port number to which you want to connect. If you want to use the established port number 80, you do not need to input this value.
**path:** Type the command name.
**parameter:** Type the command parameter if necessary. You can use the special tags mentioned below for the parameters.

## Proxy server name

When you send HTTP request via a proxy server, type the name or IP address of the proxy server, using up to 64 characters.

## Proxy port number

Specify the port number when you send HTTP request via the proxy server. Set a port number between 1024 and 65535.

## Method

Select the HTTP method **GET** or **POST**.

## OK/Cancel

See “Buttons common to every menu” on page 26.

## About the special tags

You can use the following five special tags to allow notification of the settings acquired by DHCP, such as an IP address. Type the tags in the parameter section of the URL that you described in the Message field of the HTTP.

### <IP>

Use this tag to embed the IP address acquired by DHCP in the text or parameter.

### <HTTPPORT>

Use this tag to embed the specified HTTP server port number in the text or parameters.

### <MACADDRESS>

Use this tag to embed the MAC address of the interface whose IP address was acquired by DHCP, in the text or parameter.

### <MODELNAME>

Use this tag to embed the camera's model name in the text or parameter.

### <SERIAL>

Use this tag to embed the camera's serial number in the text or parameter.

# Using the 802.1X Authentication Function — 802.1X Menu

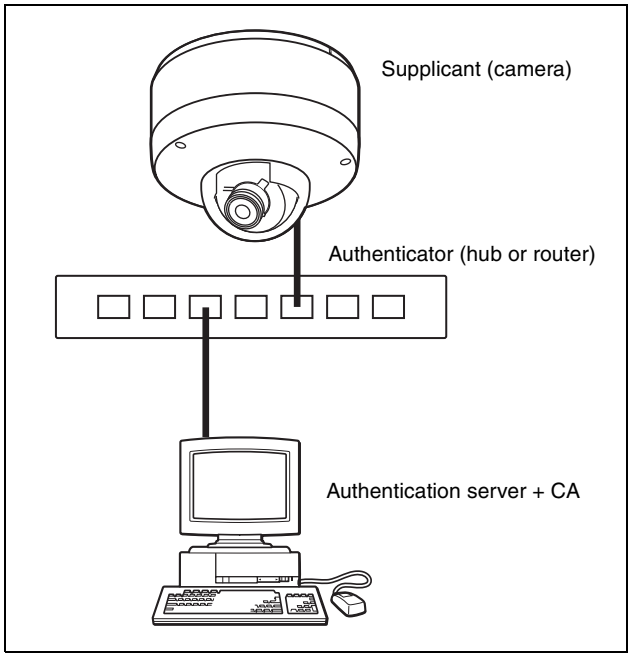
When you click 802.1X in the Administrator menu, the 802.1X menu appears.
Use this menu to configure the port-based authentication in compliance with the 802.1X standard.
The 802.1X menu consists of three tabs: **Common**, **Client certificate** and **CA certificate**.

**Note**

To use the 802.1X authentication function, you need knowledge of the 802.1X authentication and digital certificate. To establish an 802.1X network, you need to configure the authenticator, authentication server and other elements. For details on these settings, refer to the manual of the corresponding equipment.

## System configuration of 802.1X network

The following figure shows a general system configuration of an 802.1X network.




### Supplicant

A supplicant is a device that connects to the authentication server to join the network. This camera serves as a supplicant in the 802.1X network. The supplicant can enter the 802.1X network after the appropriate authentication by the authentication server.

### Authenticator

An authenticator forwards certificate request data or response data that the supplicant or authentication server issues to the other party. Normally a hub or router serves as an authenticator.

### Authentication server

An authentication server has a database of connecting users and verifies if the supplicant is a correct user or not. It is also called RADIUS server.

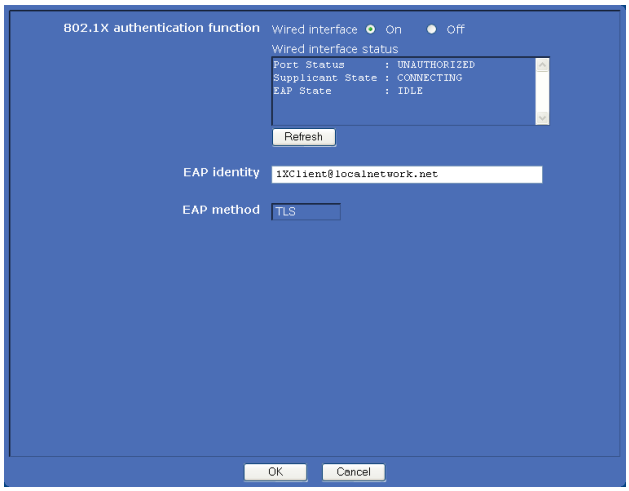
### CA (Certificate Authority)

A CA issues and manages certificates of the authentication server (CA certificates) and user certificates. The CA is essential for certificate-based user authentication. Normally a CA is located inside an authentication server.

**Note**

This camera supports only the EAP-TLS mode in which the supplicant and the server authenticate each other using the certificate. This mode requires a CA that issues the certificate.

## Common Tab – Basic setting of 802.1X authentication function




### 802.1X authentication function

This item is used for enabling/disabling the 802.1X authentication function and checking the status.

### Wired interface

To activate the 802.1X authentication function, select **On**.

### Wired interface status

Shows the authentication status of the 802.1X authentication function.

Click **Refresh** to update the status.

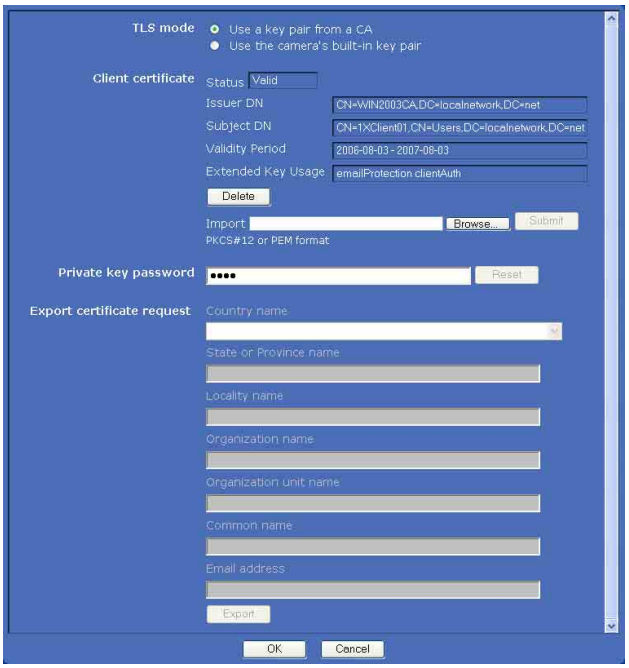
### EAP identity
Type the user name to identify the client in the 802.1X authentication server using 3 to 253 characters.

### EAP method
Shows the authentication method used with the authentication server. It is fixed as this camera supports only the TLS method.

### OK/Cancel
See “Buttons common to every menu” on page 26.

## Client certificate Tab

You can import a client certificate to the camera or export a certificate request.




### TLS mode
Select the TLS mode.
The EAP-TLS authentication performs certificate-based authentication. It requires private key information consisting of a key pair for the client certificate to store in the camera. The TLS mode allows two modes according to the acquirer of the key pair.

**Use a key pair from a CA:** Uses the certificate including the private key information issued by a CA. The PKCS#12 and PEM formats are supported.

**Use the camera’s built-in key pair:** Uses the private key information that is stored in the tamper-resistant chip built in the camera. This mode is safety because the private key information is not carried out at the time of issuing the certificate request or importing the certificate. Only the PEM format is supported in this mode.
To use this mode, first obtain the certificate from the CA by performing **Export certificate request** on page 43.

### Client certificate request
Import, display or delete the client certificate.

#### To import the client certificate
Click **Browse…** to select the client certificate to be imported.
Then click **Submit**, and the selected file will be imported to the camera.

**Note**

The import process becomes invalid if the selected file is not a client certificate or the imported client certificate is not allowed.

#### To display the information of the client certificate
When the client certificate has been saved in the camera correctly, its information appears on **Status**, **Issuer DN**, **Subject DN**, **Validity Period** and **Extended Key Usage**.

**Status:** Shows if the status of the client certificate is valid or invalid.
**Valid** means the client certificate is correctly stored and set.
**Invalid** means the client certificate is not correctly stored and set.
Possible causes of **Invalid** are the following:
– When **Use a key pair from a CA** is selected and the private key password included in the client certificate is not specified correctly
– When **Use a key pair from a CA** is selected and the private key password is specified in spite of the fact that the key pair in the client certificate is not encrypted.
– When **Use a key pair from a CA** is selected and the key pair is not included in the client certificate.
– When **Use the camera’s built-in key pair** is selected and the client certificate issued corresponding to **Export certificate request** is not imported in the camera.

**Note**

When the client certificate to be imported is of PKCS#12 format and the private key password is not set correctly, “<Put correct private key password>” is displayed in the boxes of **Issuer DN**, **Subject DN**, **Validity Period** and **Extended Key Usage**. Specify the

correct private key password to confirm the information of the certificate.

### To delete the client certificate

Click **Delete**, and the client certificate stored in the camera will be deleted.

## Private key password

Type the password for the private key information included in the client certificate using up to 50 characters. This text box is active only when **TLS mode** is set to **Use a key pair from a CA**.
Leave the text box blank if the private key information included in the client certificate is not encrypted.
If no private key password is set in the camera, the text box is active to allow entering of a password.
If a private key password is already set, it is displayed with turned letters.

### Reset

To change the private key password, click this button. The current password is cleared and the password text box is active to allow a new password entry.

**Note**

Click Cancel at the bottom of the menu if you want to cancel changing the private key password after clicking **Reset**. Doing so restores the other setting items in the Client certificate tab to the previous settings.

## Export certificate request

Exports the certificate request according to the key pair built in the camera.
To export, enter the items required for the certificate request and click **Export**.
Exporting is possible when **TLS mode** is set to **Use the camera's built-in key pair**.

**Note**

If you click **Export** when all the setting items in **Export certificate request** are blank, the certificate request is exported with "localhost" specified in **Common name**.

**Country name:** Select the country name from the drop-down list.
**State or Province name:** Type the state or province name using up to 128 alphanumeric characters and symbols.
**Locality name:** Type the locality name using up to 128 alphanumeric characters and symbols.
**Organization name:** Type the organization name using up to 64 alphanumeric characters and symbols.
**Organization unit name:** Type the organization unit name using up to 64 alphanumeric characters and symbols.
**Common name:** Type the organization name using up to 64 alphanumeric characters and symbols.
**Email address:** Type the e-mail address using up to 64 alphanumeric characters and symbols.

**Notes**

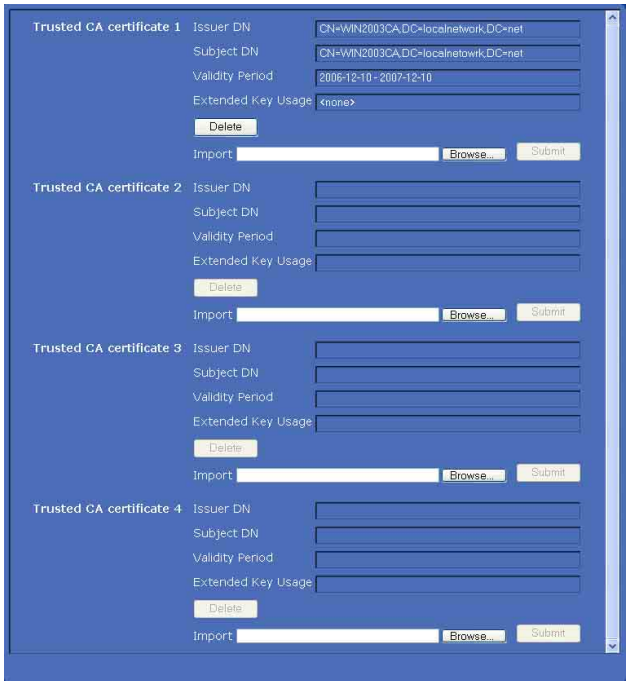
- / (slash), = (equal sign) and , (comma) cannot be used as symbols.
- The total number of characters in **State or Province name**, **Locality name**, **Organization name**, **Organization unit name**, **Common name** and **Email address** should be as follows:
  When **Country name** is selected: 218 characters or less
  When **Country name** is not selected: 220 characters or less

### OK/Cancel

See "Buttons common to every menu" on page 26.

# CA certificate Tab

You can import a trusted CA certificate (server certificate or route certificate) to the camera. Up to four certificates from trusted CAs can be imported to the camera. Only the PEM format is supported.




### To import the CA certificate

Click **Browse…** to select the CA certificate to be imported.
Then click **Submit**, and the selected file will be imported to the camera.

**Note**

Import process becomes invalid if the selected file is not a CA certificate.

#### To display the information of the CA certificate

When the CA certificate has been saved in the camera correctly, its information appears on **Issuer DN**, **Subject DN**, **Validity Period** and **Extended Key Usage**.

#### To delete the CA certificate

Click **Delete**, and the CA certificate stored in the camera will be deleted.

## Setting the 802.1X authentication function – Example of Windows Server 2003

This section explains how to configure the authentication server and CA using Microsoft Windows Server 2003.

**Note**

As this section describes authentication based on the user interface in English on Windows Server 2003, the UI terminology and page configuration may be different depending on the version of the Operating System or Service Pack and patch update status.

### Before setting

Perform the following settings before configuring an 802.1X network.

#### Active Directory (domain controller)

The following setting example is based on the assumption that the Active Directory has been configured.

#### Windows IAS configuration

To add the IAS (Internet Authentication Service), perform the following steps:

1. Configure **Remote access/VPN server** in **Manage Your Server** of Windows Server 2003.
2. Open **Add or Remove Programs** from **Control Panel** of Windows menu.
3. Install **Internet Authentication Service** in **Add/Remove Windows Components**.

#### CA configuration

To configure the CA, perform the following steps:

1. Open **Add or Remove Programs** from **Control Panel** of Windows menu.
2. Select **Add/Remove Windows Components**.
3. Add **Certificate Services** in the Component menu.
4. Select **Enterprise root CA** on **CA Type**, and proceed to next.
5. Type the name of CA on **Common Name for this CA**, and configure the CA.

### Creating a security group for Active Directory

1. Open **Active Directory Users and Computers** from **Administrative Tools** of Windows menu.
2. Select **Users** of the domain with which you want to perform 802.1X connection.
3. Select **New** from the context menu, then select **Group** and configure the group for 802.1X connection.
   For example, the group “Wired_802.1X_Group” is assumed for explanation purposes.

### Configuring the Internet Authentication Service

1. Open **Internet Authentication Service** from **Administrative Tools** of Windows menu.
2. Click **Register Server in Active Directory** on the operation menu.
3. Read the displayed precautions carefully and click **OK** to accept them.

Then, continue to configure the EAP-TLS policy.

4. Select **Remote Access Policy** and right-click.
5. Select **New** from the context menu, and select **Remote Access Policy** to open the “New Remote Access Policy Wizard.”
6. Select **Set up a custom policy**.
7. Set the following items:
   **Policy name:** Type “Allow 802.1X Access” as an example.
   **Policy conditions:** Click **Add** and add the following items:

– NAS Port-Type: Ethernet, Wireless-IEEE802.11, Wireless-Other and Virtual (VPN)
– Windows-Groups: Wired_802.1X_Group

**Permissions:** Select **Grant remote access permission**.

**Edit Profile:**
– Dial-in Constraints tab: Specify the session time out period during which the client is allowed to be connected, as required.
– Authentication tab: Delete checks from all the boxes. Click **EAP Method** and add **Smart Card or other certificates**.

Then, continue to configure the RADIUS client.

**8** Select **RADIUS Clients** and right-click.

**9** Select **New RADIUS Client** from the context menu.

**10** Set the following items:
**Friendly name:** Type “authenticator” as an example.
**Client address (IP or DNS):** IP address of the authenticator
**Client-Vender:** RADIUS Standard
**Shared secret:** Specify the shared secret to be set in the authenticator.

## Adding a user

**1** Open **Active Directory Users and Computers** from **Administrative Tools** of Windows menu.

**2** Select **Users** of the domain with which you want to add a user and right-click.

**3** Select **New** from the context menu, then select **User**.

**4** Set the following items to configure a new user:
For example, the log-on user name “1XClient” is assumed for explanation purposes.
**First name:** 1XClient
**User logon name:** 1XClient@<domain name>
**Password:** Specify a password. Then select **Password never expires** in account options.

**5** Select the user to be added and right-click.

**6** Select **Properties** from the context menu.

**7** Set the following items:
**Dial-in tab:** Select **Allow access** in **Remote Access Permission (Dial-in or VPN)**
**Member Of tab:** Add “Wired_802.1X_Group.”

The preparations for configuring a 802.1X network are now completed.
Proceed to issue the certificate to be imported to the camera.

## Issuing the CA certificate

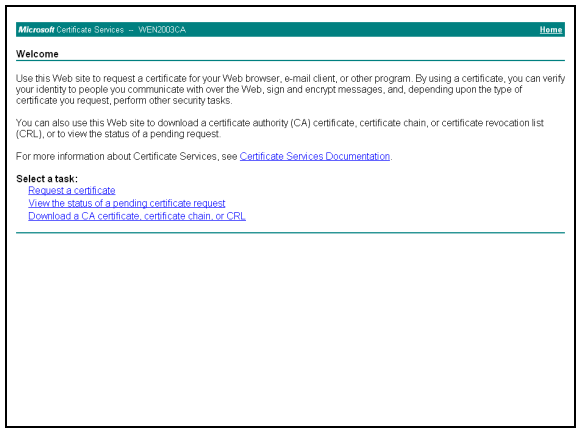
Prepare a Windows client PC (called “client PC” hereafter) to temporarily store the certificate, and configure so that the client PC and Windows Server 2003 computer can be connected through the network.

**1** Start Internet Explorer on the client PC.

**2** Type the CA’s URL in the address bar, and click **Go To**.
The CA’s URL is normally as follows:

http: //<address of the CA>/CertSrv/

The “Microsoft Certificate Services” page opens.


Microsoft Certificate Services -- WEN2003CA
Home
Welcome
Use this Web site to request a certificate for your Web browser, e-mail client, or other program. By using a certificate, you can verify your identity to people you communicate with over the Web, sign and encrypt messages, and, depending upon the type of certificate you request, perform other security tasks.
You can also use this Web site to download a certificate authority (CA) certificate, certificate chain, or certificate revocation list (CRL), or to view the status of a pending request.
For more information about Certificate Services, see Certificate Services Documentation.
Select a task:
Request a certificate
View the status of a pending certificate request
Download a CA certificate, certificate chain, or CRL

**Note**

If the Microsoft Certificate Service page does not appear using the URL above, check the following:
– Is the service of Web site enabled on Internet Information Service (IIS)?
– Is Certificate Services enabled?
– Does the firewall or antivirus software setting on the client PC block connection?
– Are the network configuration and Internet Explorer setting on the client PC correct?

**3** When Internet Explorer prompts entering the log-in user and password, type the user name as follows.
Example: when the user name is “1XClient” and the domain name “localnetwork.net”

1XClient@localnetwork.net

**4** Click **Download a CA certificate, certificate chain, or CRL**.

**5** Select **Base 64** in **Encoding method** and click **Download CA certificate**.
The “File Download” dialog opens.

**6** Specify the file storage location and save the CA certificate.

After saving the CA certificate, import it to the camera. Then the CA certificate import procedure is completed.

## Downloading the client certificate

The procedure of client certificate download differs depending on the TLS mode of the camera. This section explains the procedures for each mode.
For the TLS mode, see **TLS mode** in the Client certificate tab on page 42.

### When “Use a key pair from a CA” is selected

**1** Start Internet Explorer on the client PC and type the CA’s URL in the address bar.
The CA’s URL is normally as follows:

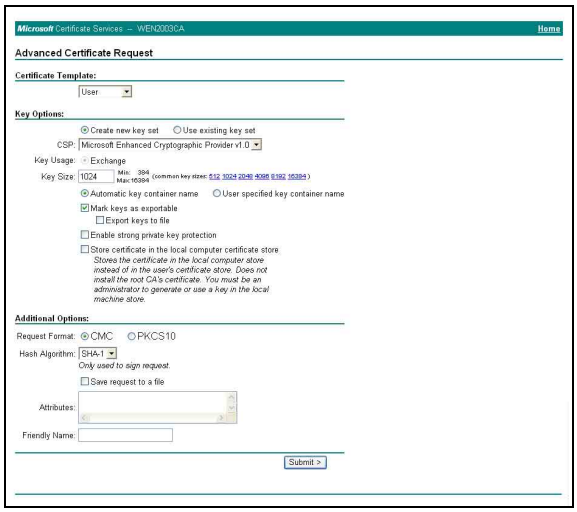
http: //<address of the CA>/CertSrv/

**2** Click **Go To**.

**3** Type the log-in user name and password correctly, and the “Microsoft Certificate Services” page opens.

**4** Click **Request a certificate**, **advanced certificate request** and **Create and submit a request to this CA** in sequence.

**5** Set the following items.




**Certificate Template:** User
**Key Options:** Create new key set
– CSP: Microsoft Enhanced Cryptographic Provider v1.0
– Key Size: 1024
– Check **Mark keys as exportable**.
**Additional Options:** Select **SHA-1** for **Hash Algorithm**.

**6** Click **Submit**.
Message “The certificate you requested was issued to you.” appears.

**7** Click **Install this certificate.** to install the certificate in the certificate store on the client PC.

**8** Click **Internet Options**, **Content** and **Certificates** of Internet Explorer in sequence.
The new client certificate is displayed in the Personal tab.

**9** Select the installed certificate and click **Export...**.
The “Certificate Export Wizard” opens.

**10** Click **Next** and select as follows.
**Do you want to export the private key with the certificate?:** Select **Yes, export the private key.**
**Select the format you want to use:** Select **Personal Information Exchange – PKCS#12(PFX)**.
**Password:** Specify the private key password.
**File to export:** Specify the name of the file to be exported.

The certificate is now exported. Import the exported file to the camera as the camera’s client certificate.
For details, see “To import the client certificate” in the Client certificate tab on page 42.

### When “Use the camera’s built-in key pair” is selected

To use this mode, first download the certificate request from the camera.
For details, see “To import the client certificate” in the Client certificate tab on page 42.

**1** Start Internet Explorer on the client PC and type the CA’s URL in the address bar.
The CA’s URL is normally as follows:

http: //<address of the CA>/CertSrv/

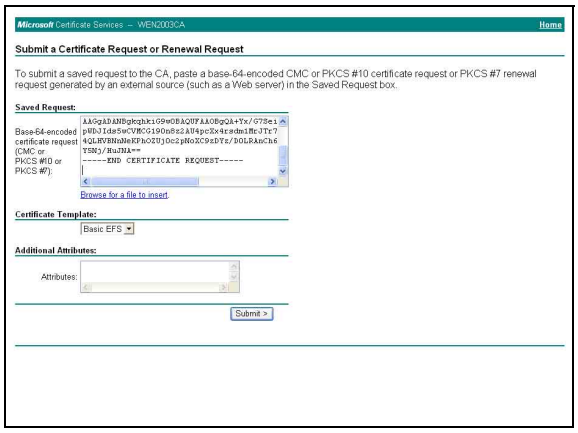
**2** Click **Go To**.

**3** Type the log-in user name and password correctly, and the “Microsoft Certificate Services” page opens.

**4** Click **Request a certificate**, **advanced certificate request** and **Submit a certificate request by using a base-64-encoded CMC or PKCS #10 file, or submit a renewal request by using a base-64-encoded PKCS #7 file** in sequence.

The “Submit a Certificate Request or Renewal Request” page opens.

**5** Paste the contents of the certificate request exported from the camera in the **Saved Request** text box.


Microsoft Certificate Services -- WEN2003CA
Home
Submit a Certificate Request or Renewal Request
To submit a saved request to the CA, paste a base-64-encoded CMC or PKCS #10 certificate request or PKCS #7 renewal request generated by an external source (such as a Web server) in the Saved Request box.
Saved Request:
Base-64-encoded certificate request (CMC or PKCS #10 or PKCS #7):
Browse for a file to insert.
Certificate Template:
Basic EFS
Additional Attributes:
Attributes:
Submit >

**6** Set **Certificate Template** to **User** and click **Submit**.
Message “The certificate you requested was issued to you.” appears.

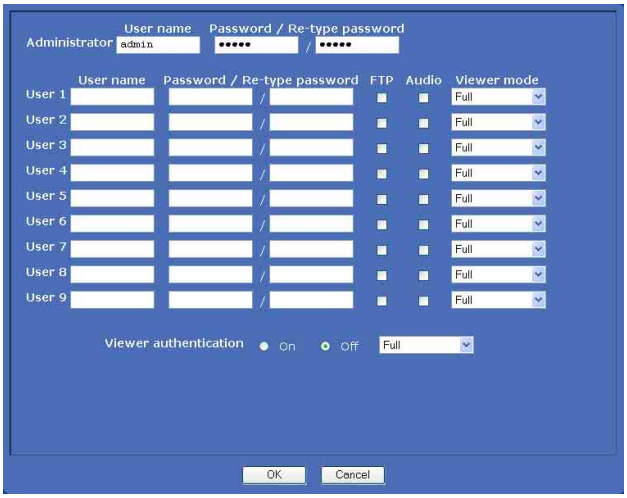
**7** Select **Base 64 encoded** and click **Download certificate** .
The certificate is now saved. Import the saved file to the camera as the camera’s client certificate.
For details, see “To import the client certificate” in the Client certificate tab on page 42.

**Note**

The certificate saved in the procedure above has the same file name as the default file name for saving the CA certificate (certnew.cer).
Be careful not to overwrite the file on the client PC.

# Setting the User — User Menu

When you click User in the Administrator menu, the User menu appears.
Use this menu to set the user names and passwords of Administrator and up to 9 kinds of users (User 1 to User 9), and the access right of each user.




## Administrator

Specify **User name**, **Password** and **Re-type password**.

## User 1 to 9

Specify **User name**, **Password**, **Re-type password**, **FTP, Audio** and **Viewer mode** for each user ID.

### User name

Type a user name between 5 and 16 characters.

### Password

Type a password between 5 and 16 characters.

### Re-type password

To confirm the password, retype the password that you typed in the **Password** box.

### FTP

Set whether this user is allowed to log in to an FTP server or not. Check the box if the user is allowed to log in to an FTP server.

### Audio

Select audio output to a speaker connected to the line output jack of the camera by using the SNC audio upload tool stored in the supplied CD-ROM. Check this box to output the audio.

**Note**

To output audio using the SNC audio upload tool, set **Audio upload** to **Enable** in the Common tab of the Camera menu (page 32).

### Viewer mode

When the user is authenticated for logging in the main viewer, select the viewer mode to be displayed after authentication.

**Full:** The user can operate all functions in this mode.
**Light:** In addition to the **View** mode, the user can select the image size of the main viewer, control digital zoom, and capture a still image.
**View:** The user can only monitor the camera image.

For the functions available for each viewer mode, see “Administrator and User” on page 16.

## Viewer authentication

Set whether the user is authenticated or not when the main viewer is displayed.

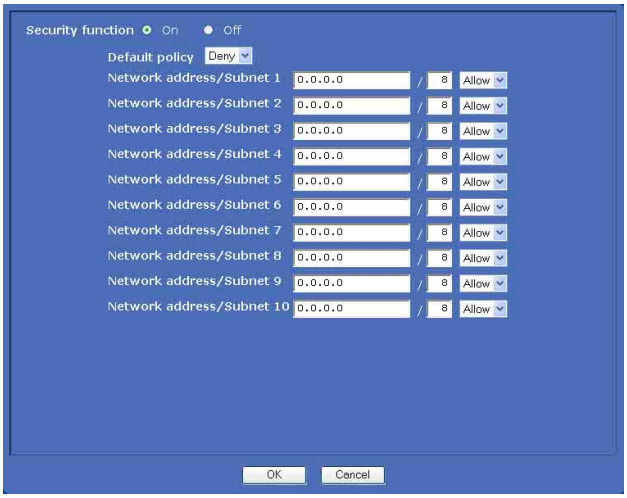
**On:** The main viewer is displayed in accordance with the viewer mode of the authenticated user.
**Off**: Select the viewer mode of the main viewer which is displayed without authentication from **Full, Light** or **View**.

## OK/Cancel

See “Buttons common to every menu” on page 26.

# Setting the Security — Security Menu

When you click Security in the Administrator menu, the Security menu appears.
Use this menu to limit the computers that can access the camera.


Security function On Off
Default policy Deny
Network address/Subnet 1 0.0.0.0 / 8 Allow
Network address/Subnet 2 0.0.0.0 / 8 Allow
Network address/Subnet 3 0.0.0.0 / 8 Allow
Network address/Subnet 4 0.0.0.0 / 8 Allow
Network address/Subnet 5 0.0.0.0 / 8 Allow
Network address/Subnet 6 0.0.0.0 / 8 Allow
Network address/Subnet 7 0.0.0.0 / 8 Allow
Network address/Subnet 8 0.0.0.0 / 8 Allow
Network address/Subnet 9 0.0.0.0 / 8 Allow
Network address/Subnet 10 0.0.0.0 / 8 Allow
OK
Cancel

## Security function

To activate the security function, select **On**.

## Default policy

Select the basic policy of the limit from **Allow** and **Deny** for the computers specified in the Network address/Subnet 1 to Network address/Subnet 10 menus below.

## Network address/Subnet 1 to Network address/Subnet 10

Type the network addresses and subnet mask values that you want to allow or deny access to the camera.
You can specify up to 10 network addresses and subnet mask values. For a subnet mask, type 8 to 32.
Select **Allow** or **Deny** from the drop-down list on the right for each network address/subnet mask.

**Tip**

The subnet mask value represents the bit number from the left of the network address.
For example, the subnet mask value for “255.255.255.0” is 24.
If you set **192.168.0.0/24** and **Allow**, you can allow access from computers having an IP address between “192.168.0.0” and “192.168.0.255”.

**Note**

You can access the camera even from a computer having an IP address whose access right is set to **Deny**, if you

enter the user name and password set for the **Administrator** boxes in the User menu.

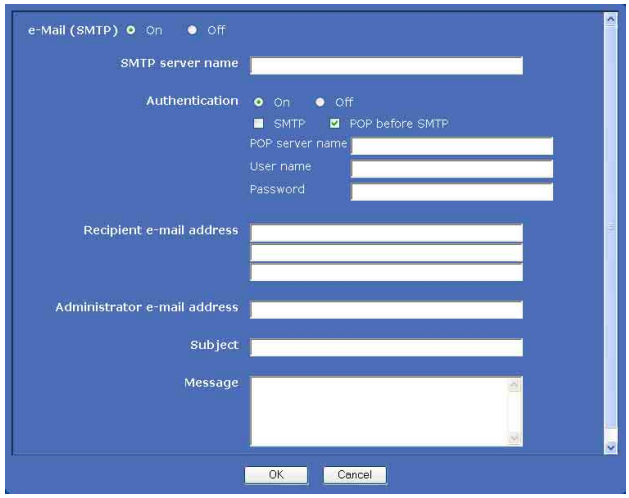
### OK/Cancel

See “Buttons common to every menu” on page 26.

# Sending an Image via E-mail — e-Mail (SMTP) Menu

When you click e-Mail (SMTP) in the Administrator menu, the e-Mail (SMTP) menu appears.
Using e-Mail (SMTP) function, you can send an e-mail with attached image file that has been shot linked with an external sensor input or with the built-in object detection function. The image file can also be sent periodically.
The e-Mail (SMTP) menu consists of three tabs: **Common**, **Alarm sending** and **Periodical sending**.

## Common Tab — Setting the e-Mail (SMTP) Function




### e-Mail (SMTP)

Select **On** when you use the e-Mail (SMTP) function.

**Notes**

- You cannot send an audio file by using the e-mail sending function.
- The frame rate and operability on the main viewer may be reduced while a file is being transmitted by the e-Mail (SMTP) function.

### SMTP server name

Type the SMTP server name using up to 64 characters, or the IP address of the SMTP server.

### Authentication

Select the authentication required when you send an e-mail.

**Off:** Select if no authentication is required when an e-mail is sent.

**On:** Select if authentication is required when an e-mail is sent. Select one of the authentication methods from the following and specify the **POP server name**, **User name** and **Password** as required.
**SMTP:** Select when SMTP authentication is required.
**POP before SMTP:** Select when POP before SMTP authentication is required.

**Note**

When you set **Authentication** to **On**, be sure to select either or both **SMTP** or/and **POP before SMTP**.

### POP server name

It is necessary when **POP before SMTP** is selected for **Authentication**.
Type the POP (receiving mail) server name using up to 64 characters, or type the IP address of the POP server. This setting is necessary when the SMTP server that sends e-mails performs authentication using the POP user account.

### User name, Password

Type the user name and password of the user who owns the mail account using up to 64 characters. This setting is necessary when the SMTP server that sends e-mails performs authentication.

## Recipient e-mail address

Type the recipient e-mail address using up to 64 characters.
You can specify up to three recipient e-mail addresses.

## Administrator e-mail address

Type the Administrator e-mail address using up to 64 characters.
This address is used for reply e-mails and sending system messages from the mail server.

## Subject

Type the subject/title of the e-mail using up to 64 characters.
When **Alarm sending** of the Alarm sending tab is set to **On**, an e-mail sent in response to the alarm detection will indicate the type of alarm in the subject. **S1** is added for sensor input detection, **MD** is added for moving object detection and **UD** is added for unattended object detection.

## Message

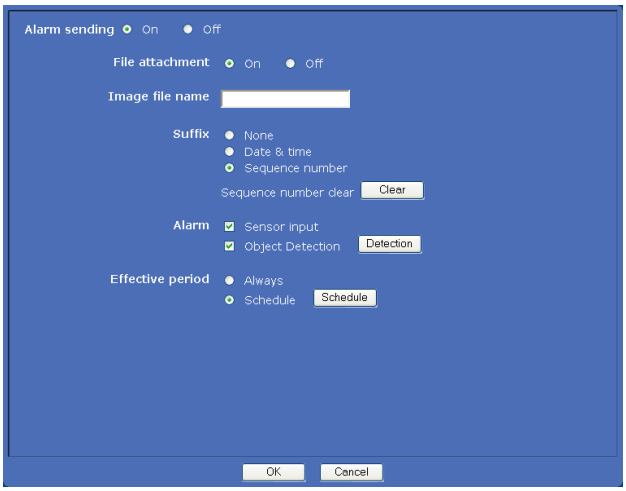
Type the text of the e-mail using up to 384 characters. (A line break is equivalent to 2 characters.)

## OK/Cancel

See “Buttons common to every menu” on page 26.

# Alarm sending Tab — Setting the e-mail sending mode when detecting the alarm

Set to send an e-mail linked with alarm detection by the external sensor input or by the built-in object detection function.




## Alarm sending

Select **On** to set sending an e-mail linked with alarm detection.

## File attachment

Set whether an image file (JPEG file) is to be attached to the e-mail or not.
When **On** is selected, the image file made using the settings below is attached. When **Off** is selected, only the message is sent.

## Image file name

Type the file name you want to assign to the image to be attached to an e-mail. You can use up to 10 alphanumeric characters, - (hyphen) and _ (underscore) for naming.

## Suffix

Select a suffix to be added to the file name.

**None:** No suffix is added. The image file name is assigned to the image to be sent via e-mail.
**Date & time:** The date & time suffix is added to the image file name.
The date/time suffix consists of lower two-digits of the year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits), second (2 digits), and consecutive number (2 digits), thus adding 14-digit number to the image file name.

**Sequence number:** A consecutive number of 10 digits between 0000000001 and 4294967295 and two fixed digits 00 are added to the image file name.

### Sequence number clear

Click **Clear** to reset the **Sequence number** suffix to 1.

### Alarm

Select the alarm to be linked with e-mail notification.

**Sensor input:** The external sensor that is connected to sensor input of the camera I/O port.
**Object detection:** The alarm detected by the object detection function.
Click **Detection**, and the Object detection menu is displayed to allow you to set the object detection function (page 65).

### Effective period

Set the period during which the alarm detection is effective.

**Always:** The alarm detection is always effective.
**Schedule:** You can specify the period during which the alarm detection is effective.
Click **Schedule** and the menu for the effective period is displayed. (“Setting the Schedule — Schedule Menu” on page 63)

### OK/Cancel

See “Buttons common to every menu” on page 26.

## Periodical sending Tab — Setting the periodical e-mail sending mode

You can set to send e-mails periodically.

### Periodical sending

Select **On** when you want to use periodical e-mail sending.

### Image file name

Type the file name of the image attached to the e-mail using up to 10 alphanumeric characters, - (hyphen) and _ (under score).
The actual image file name will be the specified image file name with a suffix and the extension .jpg.

### Suffix

Select a suffix to be added to the file name used when the e-mail is sent.

**None:** The name of the sent file will be the image file name.
**Date & time:** The date & time suffix is added to the image file name.
The date & time suffix consists of lower two-digits of the year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits) and second (2 digits), and consecutive number (2 digits), thus adding a 14-digit number to the image file name.
**Sequence number:** A consecutive number of 10 digits between 0000000001 and 4294967295 and two fixed digits 00 are added to the image file name.

### Sequence number clear

Click **Clear** to reset the **Sequence number** suffix to 1.

### Interval

Type the interval at which you want to send an e-mail periodically. You can set the hour (H) and minutes (M) between 30 minutes and 24 hours (one day).

### Effective period

Set the period during which periodical sending will be effective.

**Always:** Periodical sending is always effective.
**Schedule:** You can specify the period during which periodical sending is effective.
Click **Schedule** and the menu for the effective period is displayed. (“Setting the Schedule — Schedule Menu” on page 63)

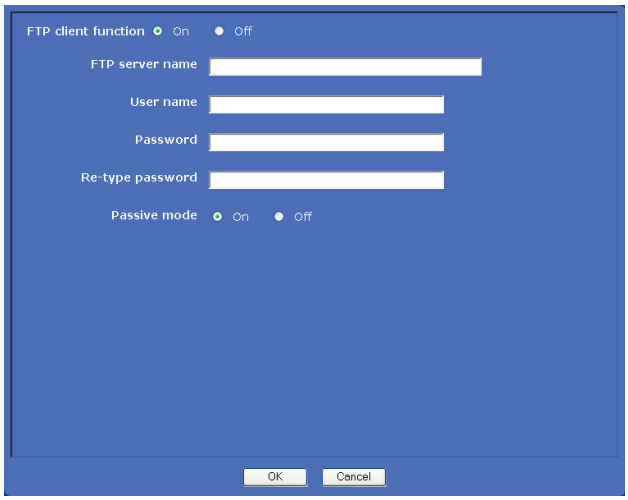
### OK/Cancel

See “Buttons common to every menu” on page 26.

# Sending Images to FTP Server
## — FTP client Menu

When you click FTP client in the Administrator menu, the FTP client menu appears.
Use this menu to set up for capturing and sending still images to an FTP server. Using FTP client function, you can send an image and audio file that has been shot and recorded linked with the external sensor input or with the built-in object detection function to an FTP server. The image file can also be sent periodically.
The FTP client menu consists of three tabs: **Common**, **Alarm sending** and **Periodical sending**.

## Common Tab — Setting the FTP client function




### FTP client function
To activate the FTP client function, select **On**.

**Note**

The frame rate and operability on the main viewer may be reduced while a file is being transmitted by the FTP client function.

### FTP server name
Type either the FTP server name to upload still images using up to 64 characters, or the IP address of the FTP server.

### User name
Type the user name for the FTP server using up to 64 characters.

### Password
Type the password for the FTP server using up to 64 characters.

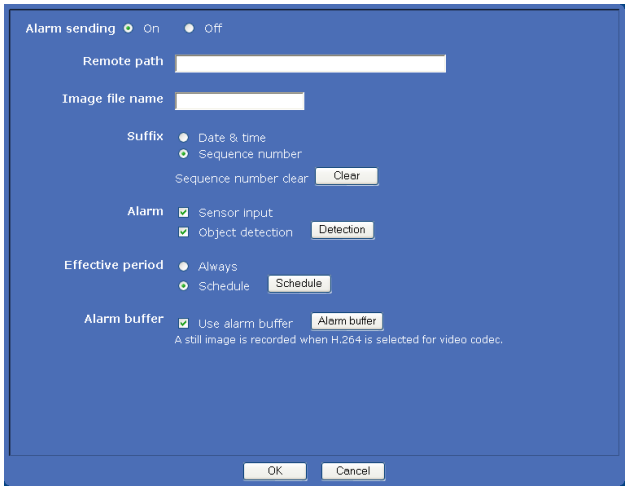
### Re-type password
To confirm the password, type the same characters as you typed in the **Password** box.

### Passive mode
Set whether you use the passive mode of FTP server or not when connecting to the FTP server. Select **On** to connect to the FTP server using the passive mode.

### OK/Cancel
See “Buttons common to every menu” on page 26.

## Alarm sending Tab — Setting the FTP client action when detecting the alarm

Set to forward an image and audio file to the specified FTP server linked with alarm detection by the external sensor input or by the built-in object detection function.




### Alarm sending
Select **On** to send the image and audio file to the FTP server linked with alarm detection.

### Remote path
Type the path to the destination using up to 64 characters.

### Image file name
Type the file name you want to assign to the images when sending to the FTP server. You can use up to 10 alphanumeric characters, - (hyphen) and _ (underscore) for naming.

### Suffix

Select a suffix to be added to the file name.

**Date & time:** The date & time suffix is added to the image file name.
The date/time suffix consists of lower two-digits of the year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits) and second (2 digits), and consecutive number (2 digits), thus adding a 14-digit number to the image file name.
**Sequence number:** A consecutive number of 10 digits between 0000000001 and 4294967295 and an consecutive 2 digits number are added to the image file name.

**Tip**

A consecutive number added to **Date & time** and **Sequence number** is used to identify each of the multiple files created with consecutive alarm events.

#### Sequence number clear

Click **Clear** to reset the **Sequence number** suffix to 1.

### Alarm

Select the alarm to be linked with file forwarding to the FTP server.

**Sensor input:** The external sensor that is connected to sensor input of the camera I/O port.
**Object detection:** The alarm detected by the object detection function.
Click **Detection**, and the Object detection menu is displayed to allow you to set the object detection function (page 65).

### Effective period

Set the period during which the alarm detection is effective.

**Always:** The alarm detection is always effective.
**Schedule:** You can specify the period during which the alarm detection is effective.
Click **Schedule** and the menu for the effective period is displayed. (“Setting the Schedule — Schedule Menu” on page 63)

### Alarm buffer

Select **Use alarm buffer** when you are going to forward the image/audio of before and after alarm detection (pre-alarm, post-alarm).
If you do not select the alarm buffer, only the image at the moment of the alarm detection is forwarded.
Click **Alarm buffer** to display the Alarm buffer menu. For details, see “Setting the Alarm Buffer — Alarm buffer Menu” on page 64.

**Note**

This setting becomes invalid and a still image is recorded if **H.264** is selected in the Video codec tab of the Camera menu.

### OK/Cancel

See “Buttons common to every menu” on page 26.

## Periodical sending Tab — Setting the periodical FTP client activity

You can set to send image files (JPEG files) to an FTP server periodically.

### Periodical sending

Select **On** when you want to use periodical sending.

### Remote path

Type the remote path using up to 64 characters.

### Image file name

Type the file name of the image sent to the FTP server using up to 10 alphanumeric characters, - (hyphen) and _ (under score).
The actual image file name will be the specified image file name with a suffix and the extension .jpg.

**Note**

You cannot send the audio file using the periodical sending of the FTP client function.

### Suffix

Select a suffix to be added to the file name sent to the FTP server.

**None:** The name of the sent file will be the image file name.

**Date & time:** The date & time suffix is added to the image file name.
The date & time suffix consists of lower two-digits of year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits) and second (2 digits), and consecutive number (2 digits), thus adding a 14-digit number to the image file name.

**Sequence number:** A consecutive number of 10 digits between 0000000001 and 4294967295 and two fixed digits 00 are added to the image file name.

### Sequence number clear

Click **Clear** to reset the **Sequence number** suffix to 1.

## Interval

Type the interval at which you want to send images to the FTP server periodically. You can set the hour (H), minutes (M) and seconds (S) between 1 second and 24 hours (one day).

**Note**

The actual interval may be longer than the set value, depending on the image size, image quality setting, bit rate and the network environments.

## Effective period

Set the period during which the periodical sending is effective.

**Always:** The periodical sending is always effective.

**Schedule:** You can specify the period during which the periodical sending is effective.
Click **Schedule** and the menu for the effective period is displayed. ("Setting the Schedule — Schedule Menu" on page 63)

## OK/Cancel

See "Buttons common to every menu" on page 26.

# Recording Images in Memory
## — Image memory Menu

When you click Image memory in the Administrator menu, the Image memory menu appears.
By using the image memory function, you can record the image and audio file, which has been shot being linked with the external sensor input or with the built-in object detection function, in the built-in memory (about 18 MB) or in the CF memory card (for the SNC-DF85/DF80 only, not supplied) inserted in the camera. The image file can also be recorded periodically.
The recorded image and audio files can be found or downloaded to the computer using the FTP server function. (See "Downloading Images from the Camera — FTP server Menu" on page 58.)
The Image memory menu consists of three tabs: **Common**, **Alarm recording** and **Periodical recording**.

For the verified cards, contact your authorized Sony dealer.

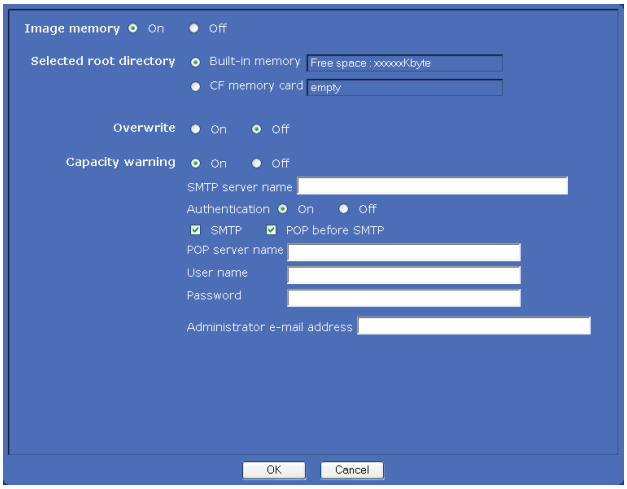
**Notes**

- The image and audio files recorded in the built-in memory are deleted when the power of the camera is turned off. For the SNC-DF85/DF80, they are deleted also when the **Selected root directory** setting is changed.
- The frame rate and operability on the main viewer may be reduced during image storage.

### Notes on the CF memory card (SNC-DF85/DF80 only)

- Set **Image memory** to **Off** when you remove the CF memory card from the camera or turn off the power of the camera with the CF memory card inserted.
- When you remove or insert a card, wait at least 10 seconds.
- Before using an CF memory card, format it using the computer or using **Format CF memory card** in the Initialize tab of the System menu (page 31).

# Common Tab — Setting the image memory function




## Image memory

To use the image memory function, select **On**.

### For the SNC-DF50

## Built-in memory

The current memory space of the built-in memory is displayed.

### For the SNC-DF85/DF80

## Selected root directory

Select a memory in which you want to save an image. The current memory space is displayed on the right.

**Built-in memory:** Built-in memory of this camera
**CF memory card:** CF memory card inserted into the CF card slot of the camera.

**Notes**

- The image and audio files recorded in the built-in memory are deleted when the **Selected root directory** setting is changed.
- When **Selected root directory** is set to **CF memory card**, "empty" is displayed in the memory space box and you cannot access the built-in memory.

## Overwrite

Select **On** to overwrite the file or not when there is insufficient memory space to record the image in the memory.

**On:** Overwrite is enabled and old files will be overwritten in the order of date.
**Off:** Overwrite is prohibited. No recording will be performed.

## Capacity warning

Select **On** to send a warning mail to the Administrator when the memory is full. Select **Off** if you do not want to send a warning mail.

**Note**

When **Overwrite** is set to **On**, a warning mail is not sent to the Administrator.

### SMTP server name

Type the name of the SMTP server for sending an e-mail, using up to 64 characters.
Otherwise type the IP address of the SMTP mail server.

### Authentication

Select the authentication required when you send an e-mail.

**Off:** Select if no authentication is required when an e-mail is sent.
**On:** Select if authentication is required when an e-mail is sent.
Select one of the authentication methods from the following and specify the **POP server name**, **User name** and **Password** as required.
**SMTP:** Select when SMTP authentication is required.
**POP before SMTP:** Select when POP before SMTP authentication is required.

**Note**

When you set **Authentication** to **On**, be sure to select either or both **SMTP** or/and **POP before SMTP**.

### POP server name

This is necessary when **POP before SMTP** is selected for **Authentication**.
Type a POP (receiving mail) server name using up to 64 characters, or type the IP address of the POP server. This setting is necessary when the SMTP server that sends e-mails performs authentication using the POP user account.

### User name, Password

Type the user name and the password of the user who owns the e-mail account. This setting is necessary when the SMTP server that sends e-mails performs authentication.

### Administrator e-mail address

Type the e-mail address of the recipient of a warning mail (e-mail address of the camera Administrator), using up to 64 characters.

## OK/Cancel

See "Buttons common to every menu" on page 26.

# Alarm recording Tab — Setting the Image memory function when detecting the alarm

You can set to record the image and audio file to the memory linked with the external sensor input or with the built-in object detection function.

## Alarm recording

Select **On** to record the image and audio file, linked with alarm detection.

## Image file name

Type the file name you want to assign to the images to be recorded. You can use up to 10 alphanumeric characters, - (hyphen) and _ (underscore) for naming.

## Suffix

Select a suffix to be added to the file name.

**Date & time:** The Date & time suffix is added to the image file name.
The Date & time suffix consists of lower two-digits of the year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits), second (2 digits) and consecutive number (2 digits), thus adding a 14-digit number to the image file name.

**Sequence number:** A consecutive number of 10 digits between 0000000001 and 4294967295 and an consecutive 2 digits number is added to the image file name.

**Tip**

A consecutive number added to **Date & time** and **Sequence number** is used to identify each of the multiple files created with consecutive alarm events.

### Sequence number clear

Click **Clear** to reset the **Sequence number** suffix to 1.

## Alarm

Select the alarm to be linked with the recording of image and audio files.

**Sensor input:** The external sensor that is connected to sensor input of the camera I/O port.

**Object detection:** The alarm by the object detection function.
Click **Detection**, and the Object detection menu is displayed to allow you to set the object detection function (page 65).

## Effective period

Set the period during which alarm detection is effective.

**Always:** The alarm detection is always effective.

**Schedule:** You can specify the period during which alarm detection is effective.
Click **Schedule** and the setting menu for the effective period is displayed. (“Setting the Schedule — Schedule Menu” on page 63)

## Alarm buffer

Select **Use alarm buffer** when you record the image/audio of before and after alarm detection (pre-alarm, post-alarm).
If you do not select the alarm buffer, only the image at the moment of the alarm detection is recorded.
Click **Alarm buffer** to display the Alarm buffer menu. For details, see “Setting the Alarm Buffer — Alarm buffer Menu” on page 64.

**Note**

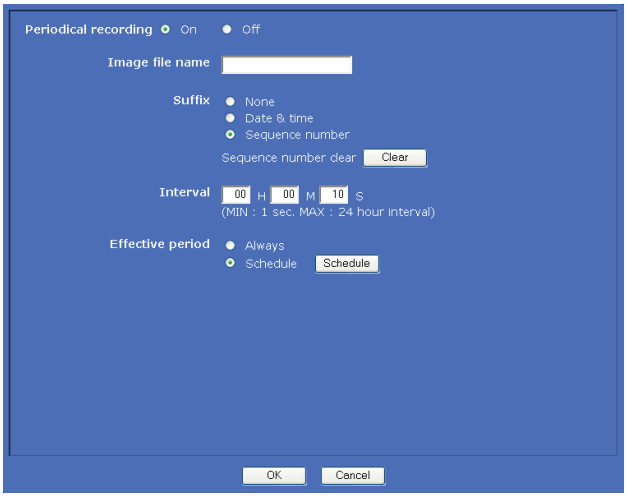
This setting becomes invalid and a still image is recorded if **H.264** is selected in the Video codec tab of the Camera menu.

## OK/Cancel

See “Buttons common to every menu” on page 26.

## Periodical recording Tab — Setting the periodical recording mode

You can set to record the image file (JPEG file) periodically.




### Periodical recording

Select **On** when you want to use periodical recording.

### Image file name

Type the file name of the image to be recorded to the memory using up to 10 alphanumeric characters, - (hyphen) and _ (under score).
The actual image file name will be the specified image file name with the a suffix and the extension .jpg.

**Note**

You cannot record the audio file using the periodical recording function.

### Suffix

Select a suffix to be added to the file name.

**None:** The recording file name will be the image file name.
**Date & time:** The date & time suffix is added to the image file name.
The date/time suffix consists of lower two-digits of the year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits), second (2 digits), and consecutive number (2 digits), thus adding a 14-digit number to the image file name.
**Sequence number:** A consecutive number of 10 digits between 0000000001 and 4294967295 and two fixed digits 00 are added to the image file name.

#### Sequence number clear

Click **Clear** to reset the **Sequence number** suffix to 1.

### Interval

Type the interval at which you want to record an image in the memory periodically. You can set the hour (H), minutes (M) and seconds (S) between 1 second and 24 hours (one day).

**Note**

The actual interval may be longer than the set value depending on the image size, image quality, bit rate, or reocording media.

### Effective period

Set the period during which the periodical recording is effective.

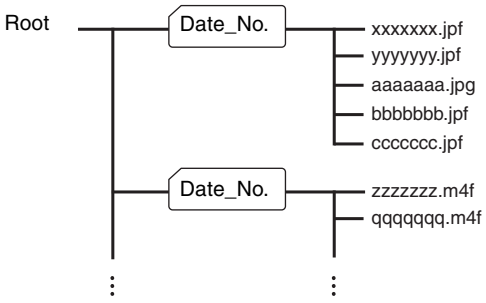
**Always:** The periodical recording is always effective.
**Schedule:** You can specify the period during which the periodical recording is effective.
Click **Schedule** and the menu for the effective period is displayed. (“Setting the Schedule — Schedule Menu” on page 63)

### OK/Cancel

See “Buttons common to every menu” on page 26.

## Folder structure of image memory

When the image memory function is used, the images are recorded with the following folder structure.




A ▭ represents a folder created automatically.
The Date_No. folder has a 11-digit name consisting of the last two digits of the year (2 digits), month (2 digits), day (2 digits), underscore and sequence number (4 digits).
In the built-in memory, one folder automatically created can store image files of about 1 MB. If the size of the image files exceeds that value, a new folder is created automatically to continue recording.

**Note**

When the CF memory card is used for the SNC-DF85/DF80, the folder size varies depending on the capacity of the CF memory card.

### About the extension of a file

A file to be recorded/sent using the image memory function or the FTP client function has one of the following three extensions depending on the video mode setting and the recording/sending settings of the camera.

**.m4f:** A file of this type is created when **Use alarm buffer** is selected in the Alarm recording or Alarm sending tab and **MPEG4** is selected on **Codec** in the Alarm buffer menu. The file may include audio data depending on the microphone setting of the camera.

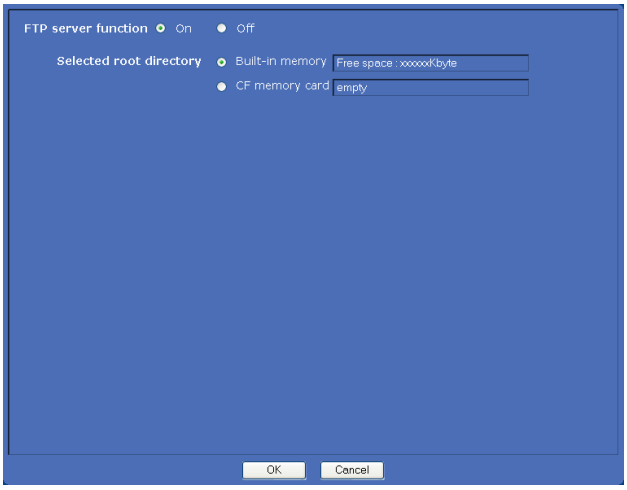
**.jpf:** A file of this type is created when **Use alarm buffer** is selected in the Alarm recording or Alarm sending tab and **JPEG** is selected on **Codec** in the Alarm buffer menu. The file may include audio data depending on the microphone setting of the camera.

**.jpg:** The file of this type is created when **Use alarm buffer** is not selected in the Alarm recording or Alarm sending tab or when a periodical sending or periodical recording is performed.

The SNC video player (page 79) allows playing of ".m4f" and ".jpf" files.

# Downloading Images from the Camera
## — FTP server Menu

When you click FTP server in the Administrator menu, the FTP server menu appears. Use this menu to set up for the FTP server function that finds a specified image and audio file stored in a built-in memory (about 18 MB) or in the CF memory card (for the SNC-DF85/DF80 only, not supplied) inserted in the camera, or downloads a file from the camera.




### FTP server function

To activate the FTP server function, select **On**.

**For the SNC-DF50**

### Built-in memory

The current memory space of the built-in memory is displayed.

**For the SNC-DF85/DF80**

### Selected root directory

Select the memory that contains the file you want to download.
The current memory space is displayed on the right.

**Built-in memory:** Built-in memory of this camera or downloads a file from the camera

**CF memory card:** CF memory card inserted into the CF card slot of the camera.

**Notes**

- When **Selected root directory** is set to **CF memory card** in the Common tab of the Image memory menu for the SNC-DF85/DF80, "empty" is displayed in the memory space box and you cannot access the built-in memory.

- The frame rate and operability on the main viewer may be reduced when you logged in to the FTP server of this unit using the FTP client software installed in the computer.

### OK/Cancel

See “Buttons common to every menu” on page 26.

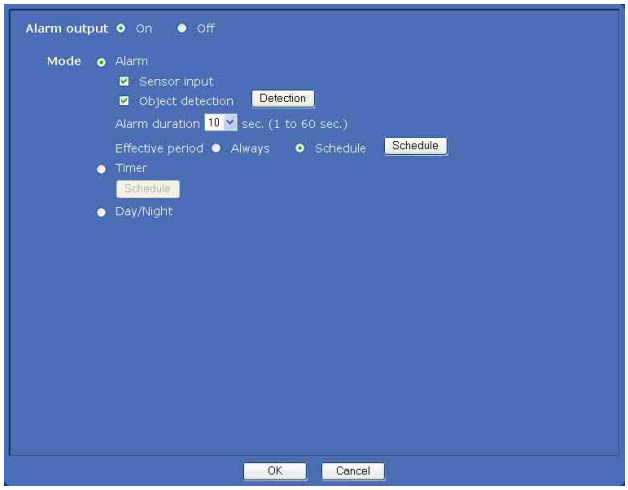
# Setting the Alarm Output — Alarm output Menu

When you click Alarm output in the Administrator menu, the Alarm output menu appears.
You can perform setting in this menu to control the alarm output of the I/O port on the rear of the camera linked to the alarm detection, the timer, and the Day/Night function (SNC-DF85/DF80 only).
The Alarm output menu consists of two tabs: **Alarm out 1** and **Alarm out 2**.

**Tip**

For the connection of peripheral devices to the alarm output of the I/O port, see the supplied Installation Manual.

## Alarm out 1, 2 Tab




### Alarm output

To activate the alarm output function, select **On**.

### Mode

Select the mode of the alarm output function.

**Alarm:** Controls alarm output by synchronizing it with an external sensor input or the built-in object detection function.
When **Alarm** is selected, the items **Sensor input, Object detection**, **Alarm duration** and **Effective period** become active.

**Timer:** Controls alarm output using the timer.
Click **Schedule** and the menu for the effective period is displayed. (“Setting the Schedule — Schedule Menu” on page 63)

**Day/Night:** Controls the alarm output linked to the day/night function. (SNC-DF85/DF80 only)

### Sensor input
Select this option when you link the alarm output to an external sensor that is connected to sensor input of the camera I/O port.

### Object detection
Select this option when you link the alarm output to the object detection function.
Click **Detection**, and the Object detection menu is displayed to allow you to set the object detection function (page 65).

### Alarm duration
Select the duration for which the alarm output is short-circuited between 1 and 60 sec.

### Effective period
This item becomes active when **Mode** is set to **Alarm**. Set the period during which the alarm detection is effective.

**Always:** The alarm detection is always effective.
**Schedule:** You can specify the period during which alarm detection is effective.
Click **Schedule** and the menu for the effective period is displayed. (“Setting the Schedule — Schedule Menu” on page 63)

### OK/Cancel
See “Buttons common to every menu” on page 26.

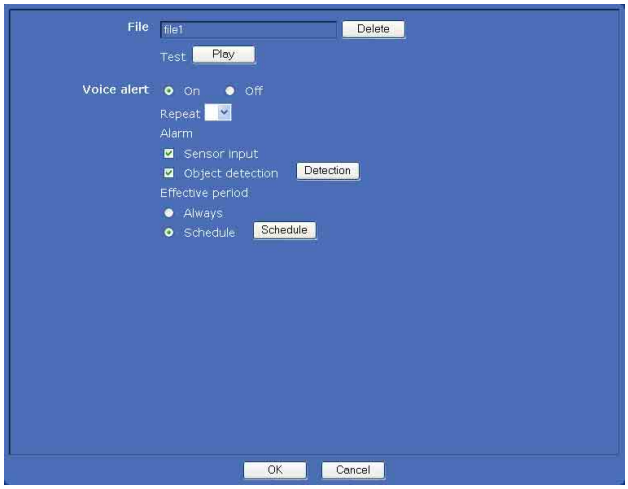
# Outputting Audio Linked to Alarm Detection
## — Voice alert Menu

Click Voice alert in the Administrator menu to display the Voice alert menu.
Use this menu to set the voice alert function to output audio from the line output jack of the camera when an alarm is detected by the sensor input or object detection function.
You can output the audio from the speaker connected to the camera in synchronization with an alarm event triggered by the sensor input or the object detection function.
The Voice alert menu consists of three tabs: **Voice alert 1**, **Voice alert 2** and **Voice alert 3**. You can configure an individual audio file on each tab.

**Note**

Before using the voice alert function, you need to save the audio file to the camera using the SNC audio upload tool stored in the supplied CD-ROM.
For the use of the SNC audio upload tool, see page 74.

## Voice alert 1, 2, 3 Tab




### File
Displays the name of the audio file saved in the camera. “Not uploaded” is displayed dimly if no audio file is saved.
To delete the audio file saved in the camera, click **Delete**.

**Note**

Before deleting the audio file, set **Voice alert** to **Off**.

### Test
When the audio file is saved in the camera, you can check it by playing it back.
Click **Play** to play back the audio file once.

### Voice alert
To use the voice alert function linked with the sensor input or the object detection function, select **On**.

### Repeat
Select playback repeat time from **1** to **3**.

### Alarm
Select the alarm to be linked with the voice alert function.

**Sensor input:** The external sensor that is connected to sensor input of camera I/O port.
**Object detection:** The alarm detected by the object detection function.
Click **Detection**, and the Object detection menu is displayed to allow you to set the object detection function (page 65).

**Notes**

- If voice alert is activated linked with a different alarm event while another voice alert is going on, the first voice alert is canceled and the second one is output.
- If two or three audio files are set to be output simultaneously linked with the same alarm event, the priority is given in the order **Voice alert 1**, **2** and **3**.

### Effective period
Set the period during which the alarm detection is effective.

**Always:** The alarm detection is always effective.
**Schedule:** You can specify the period during which the alarm detection is effective.
Click **Schedule**, and the menu for the effective period is displayed. (“Setting the Schedule — Schedule Menu” on page 63)

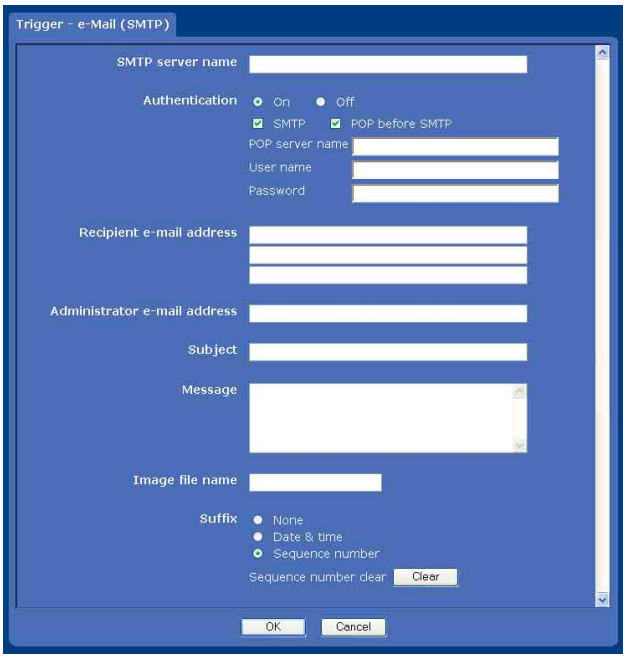
### OK/Cancel
See “Buttons common to every menu” on page 26.

# Setting the Operations from the Viewer
## — Trigger Menu

Click Trigger in the Administrator menu to display the Trigger menu.
In this menu, you will select the activities that can be performed when is clicked on the main viewer.

### e-Mail (SMTP)
Checking this box allows you to select **e-Mail** from the trigger drop-down list in the main viewer.
By selecting **e-Mail** and clicking , a still image of the moment you click is captured, and your e-mail with the image file attached is sent to the specified mail address.

When you click **e-Mail (SMTP)**, the Trigger-e-Mail (SMTP) menu is displayed. You can set the necessary options here. The setting options and setting procedures are the same as those of the e-Mail (SMTP) menu (page 49).




## FTP client

Checking this box allows you to select **FTP** from the trigger drop-down list in the main viewer.
By selecting **FTP** and clicking , a still image of the moment you click is captured, and the image file is sent to the FTP server.

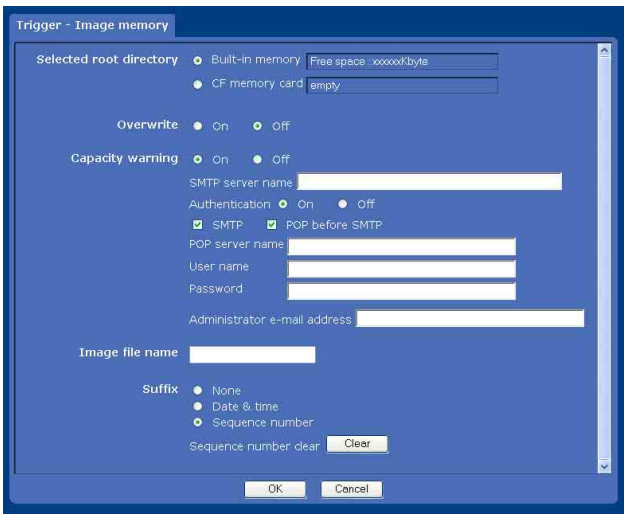
When you click **FTP client**, the Trigger-FTP client menu is displayed. You can set the necessary options here. The setting options and setting procedures are the same as those of the FTP client menu (page 52).

## Image memory

Checking this box allows you to select **Image memory** from the trigger drop-down list in the main viewer.

By selecting **Image memory** and clicking , a still image of the moment you click is captured, and the image file is recorded.

When you click **Image memory**, the Trigger-Image memory menu is displayed. You can set the necessary options here. The setting options and setting procedures are the same as those of the Image memory menu (page 54).




## Alarm output 1, 2

Checking this box allows you to select **Alarm output 1** or **Alarm output 2** from the trigger drop-down list in the main viewer. You can control the alarm output by selecting **Alarm output 1** or **Alarm output 2** and clicking .

Select the alarm ouput control mode from **Toggle** or **Timer**.

**Toggle:** Each time you click , On (short circuit) or Off (open) is switched.

**Timer:** When you click , the alarm output is switched to On (short circuit), and will automatically switched to Off (open) after the time specified in **Duration** has elapsed.

### Duration

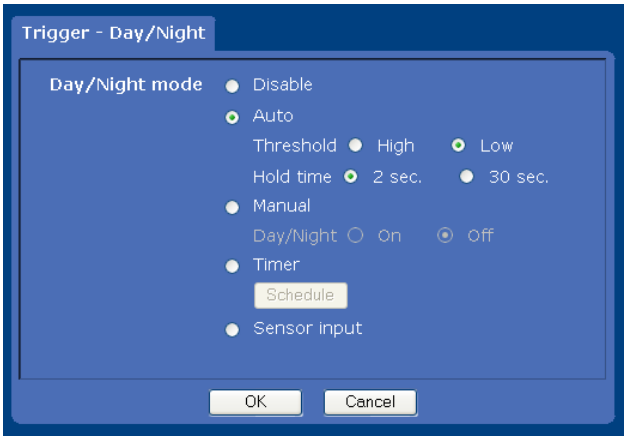
When **Timer** is selected, specify the time for which the alarm output remains short circuited, from 1 to 300 seconds.

## Day/Night (SNC-DF85/DF80 only)

Checking this box allows you to select **Day/Night** from the trigger drop-down list in the main viewer. You can control On (night mode) or Off (day mode) of the day/night function by selecting **Day/Night** and clicking .

When you click the **Day/Night** button, the Trigger-Day/Night menu is displayed. You can set the necessary options here. The setting options and setting procedures

are the same as those in the Day/Night tab of the Camera menu (page 34).




**Note**

The day/night function is invalid when **Day/Night mode** is set to **Disable** or **Auto** in the Trigger-Day/Night menu, even if you click .

### Voice alert 1, 2, 3

Checking this box allows you to select **Voice alert 1**, **Voice alert 2** or **Voice alert 3** from the trigger drop-down list in the main viewer. You can output audio from the audio file saved in the camera by selecting **Voice alert 1** , **2** or **3** and clicking .

#### File

Displays the name of the audio file saved in the camera. “Not uploaded” is displayed dimly if no audio file is saved.

### OK/Cancel

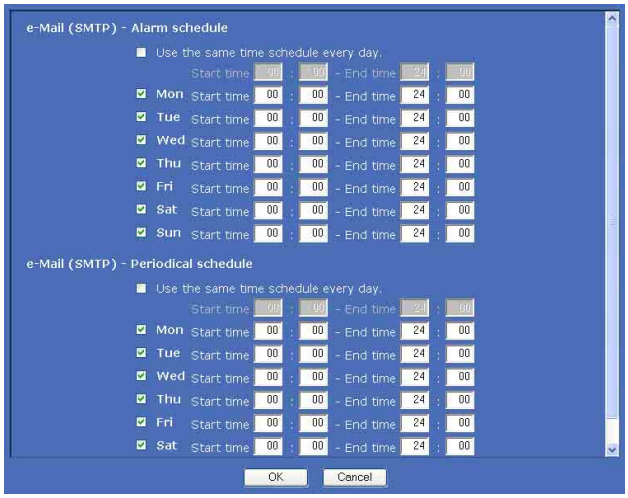
See “Buttons common to every menu” on page 26.

# Setting the Schedule — Schedule Menu

When you click Schedule in the Administrator menu, the Schedule menu appears.
The Schedule menu consists of six tabs.
This is the same menu as the Schedule menu that is displayed when you click **Schedule** to set the **Effective period** in the following menus.

**Day/Night: Schedule** in the Day/Night tab of the Camera menu (SNC-DF85/DF80 only)
**e-Mail: Schedule** in the Alarm sending or Periodical sending tab of the e-Mail (SMTP) menu
**FTP: Schedule** in the Alarm sending or Periodical sending tab of the FTP client menu
**Image memory: Schedule** in the Alarm recording or Periodical recording tab of the Image memory menu
**Alarm out: Schedule** in the Alarm out 1 or Alarm out 2 tab of the Alarm output menu
**Voice alert: Schedule** in the Voice alert 1, 2 or 3 tab of the Voice alert menu

Example: When setting e-Mail (SMTP) (Periodical sending) in the Schedule menu




#### Use the same time schedule every day

When this item is checked, the same **Start time** and **End time** are applied to all days. In that case, the **Start time** and **End time** of the day from **Mon** (Monday) to **Sun** (Sunday) cannot be input.

#### Mon (Monday) to Sun (Sunday)

The time period on the right of the checked day is the effective period of the schedule.

#### Start time, End time

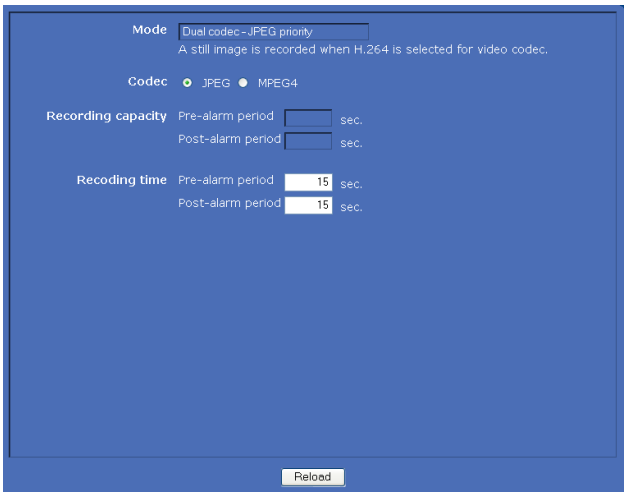
Specify the start time and the end time.

### OK/Cancel

See “Buttons common to every menu” on page 26.

# Setting the Alarm Buffer — Alarm buffer Menu

When you click Alarm buffer in the Administrator menu, the Alarm buffer menu appears.
You can set the Pre-alarm image and audio (the image and audio before the alarm detection) and the Post - alarm image and audio. These can be set when **Alarm sending** of FTP client menu or **Alarm recording** of Image memory menu is set to **On**, besides when **Use alarm buffer** is selected.




### Mode

Displays the video codec selected in the Video codec tab of the Camera menu.

**Note**

You cannot set the alarm buffer when **H.264** is selected in the Video codec tab of the Camera menu.

### Codec

Only the currently available codec(s) are active. Select the video codec to be used for the alarm buffer.

**Note**

When **Dual codec** is selected in the Video codec tab of the Camera menu and if you select here a video codec different from the priority video codec specified for **Dual codec**, the bit rate and frame rate for sending/ recording via the alarm buffer may be lower than the set values.

### Recording capacity

Displays the maximum recording capacity of the alarm buffer in the present camera setting of the video mode, image size, bit rate and frame rate.

**Pre-alarm period:** Displays the maximum recording capacity of image/audio before alarm detection.
**Post-alarm period:** Displays the maximum recording capacity of image/audio after alarm detection.

### Recording time

Set the recording time for the Pre-alarm image/audio and Post alarm image/audio.

**Pre-alarm period:** Type the recording time of the image/audio before alarm detection.
**Post-alarm period:** Type the recording time of the image/audio after alarm detection.

**Note**

The value of **Recording capacity** differs depending on the image size and image quality settings in the Camera menu.

### OK/Cancel

See “Buttons common to every menu” on page 26.

# Setting the Object Detection Function
## — Object detection Menu

When you click Object detection in the Administrator menu, the Object detection menu appears.
Using this menu, you can set the conditions for activating the built-in “Moving object detection” and the “Unattended object detection” functions. Moving object detection detects moving objects in the camera image and outputs an alarm. Unattended object detection detects difference between the previously shot background image and the image being shot currently and outputs an alarm when the difference continues recognized for more than the specified period.
The Object detection menu consists of two tabs: **Common** and **Unattended object setting**.

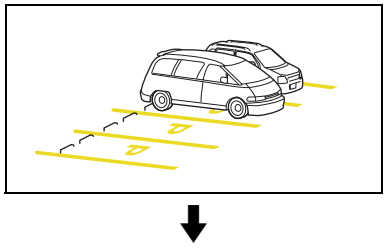
## What is unattended object detection ?

The unattended object detection function of this unit compares the reference background image with the current image to detect an unattended object. The unit can perform “Abandoned object detection” of an object that did not exist and appears now as an unattended object. The unit can also perform “Removed object detection” of an object that existed before and now has disappeared as an unattended object.

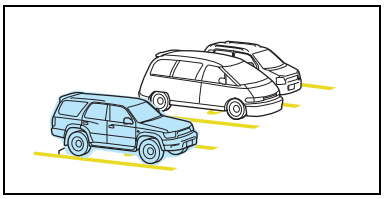
### Abandoned object detection

The camera first stores in memory the background image for reference. If an object that did not exist before appears on the background and stops, the camera detects the object as an unattended object. If the unattended object stays in camera image for more than the specified time, it is marked with a green frame and an alarm linked to unattended object detection is output. you can activate alarm sending of the FTP client function, alarm recording of the image memory function and playback of an audio file in synchronization with the alarm.

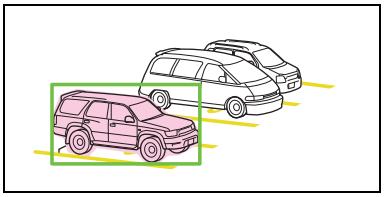
**Background image**



**A car appears in the foreground.**



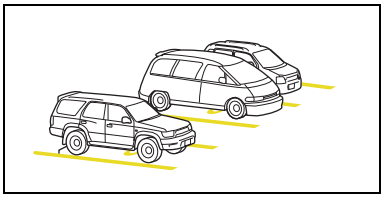
**After the detection time, the car in the foreground is detected as an unattended object.**



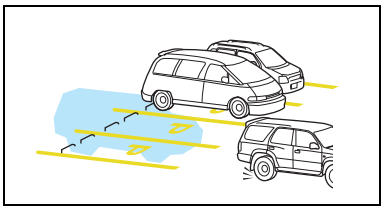
## Removed object detection

The camera first stores in memory the background image for reference. If an object that existed before moves and disappears, the camera detects the location where the object existed as an unattended object. If there are no changes in the unattended object (location) for more than the specified time, that location is marked with a green frame and an alarm linked to unattended object detection is output. You can activate alarm sending of the FTP client function, alarm recording of the image memory function and playback of an audio file in synchronization with the alarm.

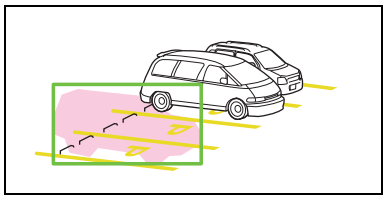
**Background image**



**The car in the foreground moves out.**



**After the detection time, the location where the car was parked is detected as an unattended object.**



**Notes**

- You can view an MPEG4 image only in the main viewer during the setting of the object detection when **Dual codec** is selected in the Video codec tab.
- The object detection function does not operate when **H.264** is selected in the Video codec tab.
- The unattended object detection may not work correctly if the brightness of a scene changes significantly, for example, when you shoot an outdoor scene continuously from day to night.
- Unattended object detection may not work correctly if the image is of flat scene such as a monochrome wall or floor.
- Before actual use, perform an operation test and confirm that the object detection function works correctly.

## When the Object detection menu is displayed for the first time

When you click **Object detection**, “Security Warning” is displayed.
When you click **Yes**, ActiveX control is installed and the Object detection menu is displayed.

Security Warning
Do you want to install and run "Sony Network Camera viewer" signed on **/**/**** **:** and distributed by:
Sony Corporation
Publisher authenticity verified by VeriSign Class 3 Code Signing 2004 CA
Caution: Sony Corporation asserts that this content is safe. You should only install/view this content if you trust Sony Corporation to make that assertion.
Always trust content from Sony Corporation
Yes
No
More Info

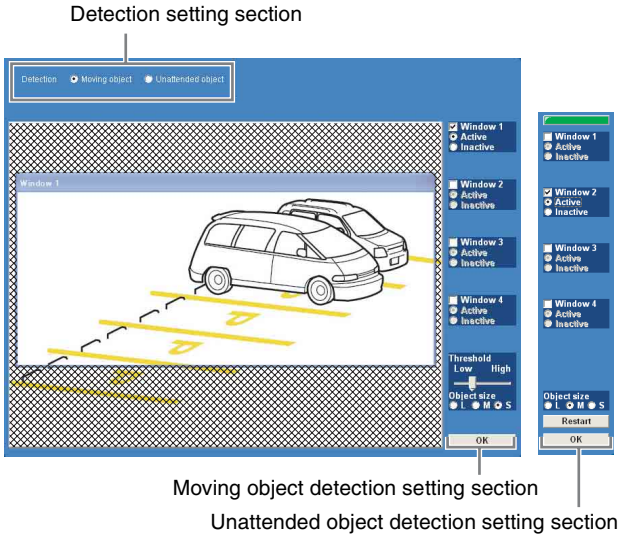
**Notes**

- If **Automatic configuration** is enabled in the Local Area Network (LAN) settings of Internet Explorer, the image may not be displayed. In that case, disable **Automatic configuration** and set the Proxy server manually. For the setting of the Proxy server, consult your network administrator.

- When you install ActiveX control, you should be logged in to the computer as Administrator.
- When you are using Windows XP Service Pack 2 or Windows Vista, the information bar or "Security Warning" may appear as you click **Object detection**. For details, see "Installing ActiveX Control" in "When using Windows XP Service Pack 2" on page 9 or "Installing ActiveX Control" in "When using Windows Vista" on page 12.

## Common Tab

Use this tab to select moving object detection or unattended object detection, and set the conditions for detection while observing a camera image.
This is the same menu as that displayed when you click **Detection** on Alarm sending of the e-Mail (SMTP) menu, or on Alarm recording of the Image memory menu.




### Detection setting section

Select either moving object detection or unattended object detection.

**Moving object:** Select when you want to perform moving object detection. When this option is selected, the moving object setting menu appears. See "Setting items for moving object detection" on page 67.

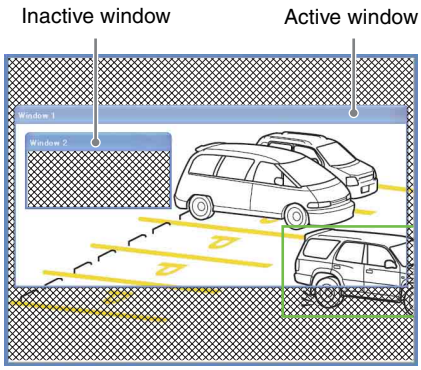
**Unattended object:** Select when you want to perform unattended object detection. When this option is selected, the unattended object setting menu appears. See "Setting items for unattended object detection" on page 68.

### Setting items for moving object detection

The following setting items appear when **Detection** is set to **Moving object**.

#### Monitor display

Set the active/inactive window while monitoring an image.
The outside of the active window and the inside of the inactive window are regarded as inactive areas and shown with a mesh screen.




**Notes**

- The image displayed on the monitor display has low resolution.
- The colors and green frames shown in the monitor display are not displayed on the image files that are sent or recorded linked to the object detection function.

#### Window 1 to Window 4 check boxes

When you check a check box, the corresponding window (active or inactive window) appears on the monitor display. You can change the position and size of the window.

**Active:** To use the window as an active area in which moving object detection is performed.
**Inactive:** To use the window as an inactive area in which any moving object is ignored. Select **Inactive** to set an inactive area inside an active window.

**Note**

You cannot set all four windows as **Inactive** windows. Be sure to set one or more windows as **Active** window(s).

#### Threshold setting slider bar

Set the threshold level of moving object detection that is common to all the windows.
The threshold level is used to judge whether or not there has been any motion in the camera image. When the

motion of an object on the monitor screen has exceeded the threshold level, the camera judges that there has been a motion and a green frame is shown. An alarm is output when a green frame is added to the object displayed in one of the active windows.

### Object size

Select the minimum size of a detectable object from **L** (Large), **M** (Medium) and **S** (Small).
Each option represents the corresponding size below:

**L:** 64 × 64 dots
**M:** 32 × 32 dots
**S:** 8 × 8 dots

**Tip**

The monitor display is 640 × 480 dots. Size **L** is 1/10 the width of the monitor display.

### OK button

Click to send the set values to the camera and confirm the settings.

**Note**

Although the display on the monitor quickly responds to the setting being performed as you change the size of a window or a setting, you need to click the **OK** button to confirm the setting. The setting will be cancelled if you do not click the **OK** button.

## To set the moving object detection function

Set the moving object detection function as follows:

**1** Select **Moving object** for **Detection**.
The setting items for moving object detection appear.

**2** Check the **Window 1** check box.
The **Window 1** frame appears on the monitor display.

**3** Adjust the position and size of **Window 1**.
Drag **Window 1** to move it and change its size.

**4** Set the active or inactive windows.
Select **Active** to set **Window 1** as an active area, or **Inactive** to set it as an inactive area.

**Note**

If an active window and inactive window overlap, the overlapped portion will be regarded as an inactive area.
When the two windows overlap, the inactive window is displayed over the active window on the monitor screen. If the active window is hidden by an inactive window and its position or size cannot be changed, temporarily change the active window to an inactive window and change the position and size. After changing, reset it as an active window.

**5** Set the function for **Window 2** to **Window 4**.
Repeat steps 2 to 4 for each window.

**6** Select the object size for **Object size**.
Select a larger size if a small noise may be detected as a motion by mistake.

**7** Adjust the **Threshold** setting slider bar to set the threshold level at which the camera executes detection.
Adjust the detection level while observing the monitor screen and actually shooting a moving object.

**8** Click **OK**.
The moving object detection settings are confirmed.

**Note**

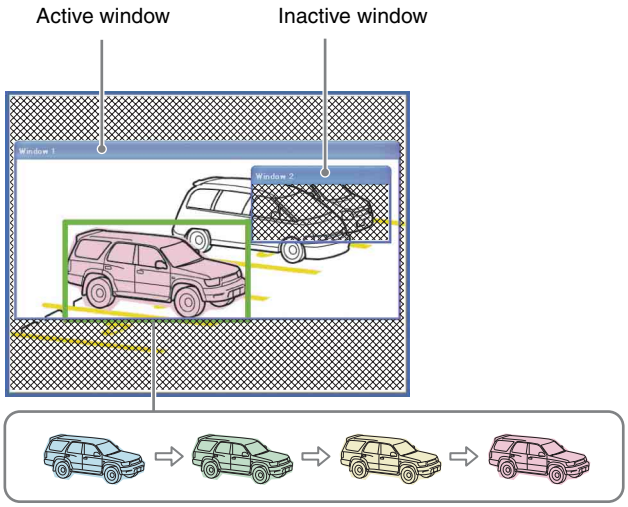
Be sure to click the **OK** button to confirm the settings. The setting will be cancelled if you do not click the **OK** button.

## Setting items for unattended object detection

The following setting items appear when **Detection** is set to **Unattended object**.

### Monitor display

Set the active/inactive window while monitoring a moving image.




When a prospective unattended object is detected on the monitor display, it will be colored. The object's color will be changed from blue to green, yellow, and red in sequence, as the possibility of it being an unattended object increases. This change of color shows that unattended object detection is in progress. When the camera finally regards the object as an unattended object, a green frame is displayed.

**Notes**

- The colors and green frames shown in the monitor display to indicate prospective unattended objects are not displayed on the image files that are sent or recorded linked to the object detection function.
- The image displayed on the monitor display has low resolution.

### Status lamp

Displays whether or not unattended object detection is operating.

**Gray:** Unattended object detection is not operating because it is in the process of acquiring the background image. When unattended object detection starts, it acquires the background image. Unattended objects are not detected during this period.

**Green:** Unattended object detection is operating because the background image has been acquired.

### Window 1 to Window 4 check boxes

When you check the check box, the corresponding window (active or inactive window) appears on the monitor display. You can change the position and size of the window.

**Active:** To use the window as an active window in which unattended object detection is performed.

**Inactive:** To use the window as an inactive window in which any unattended object is ignored. Select **Inactive** to set an inactive area inside an active window.

**Note**

You cannot set all four windows as **Inactive** windows. Be sure to set one or more windows as **Active** window(s).

### Object size

Select the minimum size of the detectable unattended object from **L** (Large), **M** (Medium) and **S** (Small). Each option represents the corresponding size below:

**L:** 64 × 64 dots
**M:** 32 × 32 dots
**S:** 8 × 8 dots

**Tip**

The monitor display is 640 × 480 dots. Size **L** is 1/10 the width of the monitor display.

### Restart button

Click this button to initialize the unattended object detection function. A new background image will be acquired from the current image.

### OK button

Click to send the set values to the camera and confirm the settings.

**Notes**

- Unattended object detection does not operate until the status lamp turns green.
- Although the display on the monitor quickly responds to the setting being performed as you change the size of a window or a setting, you need to click the **OK** button to confirm the setting. The setting will be cancelled if you do not click the **OK** button.

### To set the unattended object detection function

Set the unattended object detection function as follows:

**1** Select **Unattended object** for **Detection**.
The setting items for unattended object detection appear.

**2** Wait until the status lamp turns green.
When the status lamp is gray, the camera is in the process of acquiring a background image.
Unattended object detection does not work during this period.
The status lamp turns green when the background image has been acquired.

**Note**

When you acquire a background image, use an image with as little motion as possible. If you use an image with a lot of motion, it will take a long time to complete acquiring of the background image.

**3** Check the **Window 1** check box.
The **Window 1** frame appears on the monitor display.

**4** Adjust the position and size of **Window 1**.
Drag **Window 1** to move it and change its size.

**5** Set the active or inactive windows.
Select **Active** to set **Window 1** as an active area, or **Inactive** to set it as an inactive area.

**Note**

If an active window and inactive window overlap, the overlapped portion will be regarded as an inactive area.
When the two windows overlap, the inactive window is displayed over the active window on the monitor screen. If the active window is hidden by an inactive window and its position or size cannot be changed, temporarily change the active window to an inactive window and change the position and size. After changing, reset it as an active window.

**6** Set the function for **Window 2** to **Window 4**.
Repeat steps 3 to 5 for each window.

**7** Select the object size for **Object size**.
Select a larger size if a small noise may be detected as an object by mistake.

**8** Check whether an unattended object is detected properly.
Place an object in the window and confirm that unattended object detection works correctly.
The object regarded as an unattended object is marked with a green frame.

**Note**

It may take a long time until an unattended object is detected, depending on the image being shot.

**9** Click **OK**.
The unattended object detection settings are confirmed.

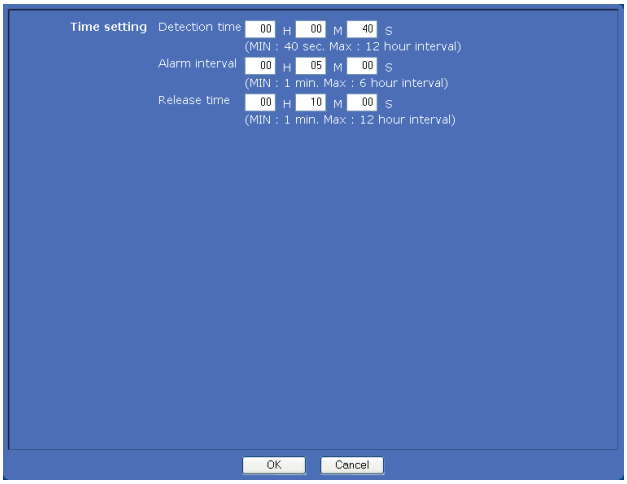
**Note**

Be sure to click the **OK** button to confirm the settings. The setting will be cancelled if you do not click the **OK** button.

**10** Set **Detection time**, **Alarm interval** and **Release time** in the Unattended object setting tab.

## Unattended object setting Tab

Use this tab to set the alarm time for unattended object detection.


Time setting
Detection time
00 H 00 M 40 S
(MIN : 40 sec. Max : 12 hour interval)
Alarm interval
00 H 05 M 00 S
(MIN : 1 min. Max : 6 hour interval)
Release time
00 H 10 M 00 S
(MIN : 1 min. Max : 12 hour interval)
OK
Cancel

### Time setting

Unattended object detection requires the following three kinds of time settings.

#### Detection time

Set the period of time from when an object appears in an active window and stops or when an object in an active window disappears until the point when that object is regarded as an unattended object. An alarm will be output if the specified period has elapsed.
You can set the time between 40 seconds and 12 hours.

### Alarm interval

You can repeat the alarm output in an interval of the preset time after an object has been regarded as an unattended object.
If you set **Alarm interval** to 5 minutes, for example, so that an alarm will be output every 5 minutes repeatedly after an unattended object is detected.
You can set the time between 1 and 6 hours.

### Release time

Set the period of time required when the object once regarded as an unattended object is regarded as a background.
An alarm will no longer be output if the specified period has elapsed as the object once regarded as an unattended object is regarded as a background.
You can set the time between 1 and 12 hours.

**Note**

Set **Release time** to a larger value than **Detection time**.

This section explains how to use the application software and commands, including the supplied CD-ROM.

# Using the Supplied Setup Program

Explains the functions except those of the Network tab in the IP Setup Program.

To install the Setup Program, to assign an IP address and to set the network, see “Assigning the IP Address to the Camera” on page 7 in “Preparation”.

**Notes**

- The Setup Program may not operate correctly if you use a personal firewall or antivirus software in your computer. In that case, disable the software or assign an IP address to the camera using another method. For example, see “Assigning the IP Address to the Camera Using ARP Commands” on page 85.
- If you are using Windows XP Service Pack 2 or Windows Vista, disable the Windows Firewall function. Otherwise the IP Setup Program will not operate correctly. For the setting, see “Configuring Windows Firewall” in “When using Windows XP Service Pack 2” on page 10 or “Configuring Windows Firewall” in “When using Windows Vista” on page 12.

## Starting the Setup Program

Select **Program** from the Start menu of Windows, then select **Program**, **IP Setup Program** and **IP Setup Program** in sequence.
The IP Setup Program starts and the Network tab appears. The IP Setup Program detects cameras connected to the local network and lists them on the Network tab window.

When you are using Windows Vista, message “User Account Control – An unidentified program wants access to your computer” may appear. In this case, click **Allow**.

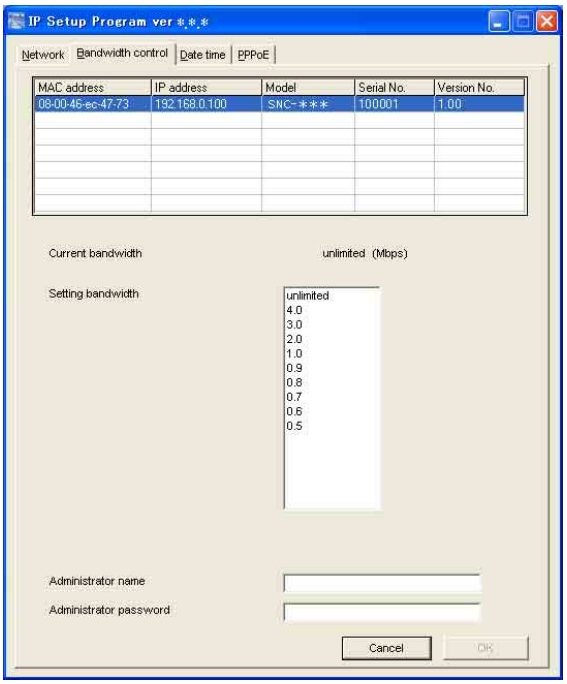
## Bandwidth control Tab

You can set the communication bandwidth for the JPEG image.

**Note**

The bandwidth cannot be controlled for the **MPEG4** or **H.264** image.

1 Click the Bandwidth control tab to display the bandwidth setting window.
The current bandwidth is displayed in **Current bandwidth**.




2 Click to select the camera to set the bandwidth from the list box.

3 Click to select the desired bandwidth from the **Setting bandwidth** list box.

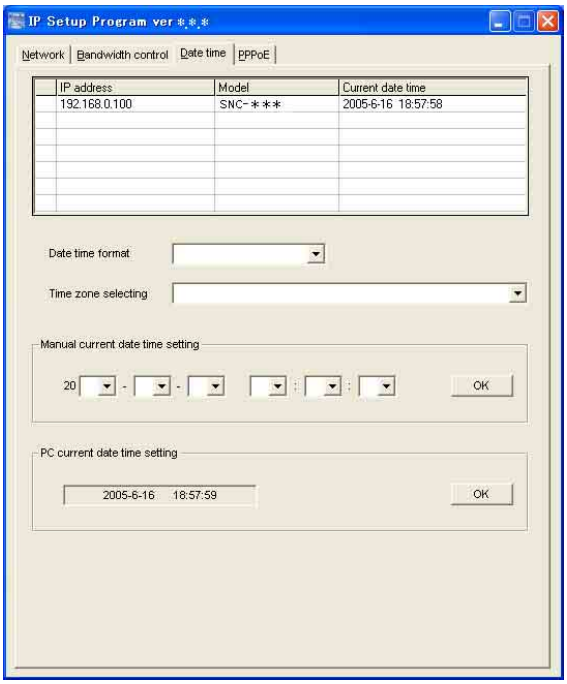
4 Type the **Administrator name** and **Administrator password** in each box.
The factory settings of both items are “admin.”

5 Click **OK**.
If “Setting OK” is displayed, the bandwidth setting is completed.

## Date time Tab

You can set the date and time on the camera.

**1** Click the Date time tab to display the date/time setting window.




**2** Click to select the camera that you want to set the date and time for.

You can select multiple cameras and set the date and time simultaneously.

**3** Select the date/time format from the **Date time format** drop-down list.

**4** Select the area where the camera is installed from the **Time zone selecting** drop-down list.

**5** Set the date and time.

You can set the date and time in two ways.

### Manual current date time setting

Set the current date and time on the **Manual current date time setting** boxes, and click **OK**. The setting boxes are for the year (last two digits), month, date, hour, minutes and seconds from left to right.

### PC current date time setting

The date and time set on the computer is displayed in the **PC current date time setting** box.
Click **OK** on the right to set the camera's date and time to coincide with the displayed computer's date and time.

**Note**

Due to network properties, there may be a slight difference between the displayed computer's date and time and those set on the camera.

## Rebooting the camera

Click **Reboot** on the Network tab to reboot the camera. It will take about two minutes to start again.

# Using the SNC audio upload tool — Transmitting audio to camera

The supplied SNC audio upload tool allows you to transmit sound from the computer to the camera. This section explains the setup and operations of the SNC audio upload tool.

The SNC audio upload tool supports the following audio data to be transmitted.

| Audio CODEC | Transmission rate |
|---|---|
| G.711 (μ-LAW) | 64 kbps |
| G.726 | 40 kbps |
| G.726 | 32 kbps |
| G.726 | 24 kbps |
| G.726 | 16 kbps |

**Note**

Only one user can transmit sound to the camera. Meanwhile, another user will not be able to transmit sound to the camera.

## Installing the SNC audio upload tool

1 Insert the CD-ROM in your CD-ROM drive.
A cover page appears automatically in your Web browser.
If it does not appear automatically in the Web browser, double-click on the index.htm file on the CD-ROM.

When you are using Windows Vista, pop-up "AutoPlay" may appear. For details, "Installing software" in "When using Windows Vista" on page 11.

2 Click the **Setup** icon of SNC audio upload tool.
The "File Download" dialog opens.

When you are using Windows XP Service Pack 2 or Windows Vista, a message regarding the active contents may appear. For details, see "Installing software" in "When using Windows XP Service Pack 2" on page 9 or "Installing software" in "When using Windows Vista" on page 11.

3 Click **Open**.

**Note**

If you click "Save this program to disk" on the "File Download" dialog, you cannot install the tool correctly. Delete the downloaded file, and click the **Setup** icon again.

4 Install the SNC audio upload tool following the wizard displayed.
If the Software License Agreement is displayed, read it carefully and accept the agreement to continue with the installation.

## Connecting the camera to the computer

1 Connect a speaker to the 🔊 (line output) jack on the camera.

2 Connect a microphone to the microphone input jack on the computer.

**Note**

If the microphone input jack of the computer is not set correctly, no sound is transmitted from the computer and nothing is output from the speaker connected to the camera.
Set the microphone input jack from the control panel of Windows.

### On Windows 2000

1 Select **Sounds and Multimedia** from Control Panel.

2 Click **Volume** in the **Sound Recording** section on the Audio tab.
The Recording Control window opens

3 Check **Select** in the **Microphone** section.

### On Windows XP

1 Select **Sounds and Audio Device** from Control Panel.

2 Click **Volume** in the **Sound Recording** section on the Audio tab.
The Recording Control window opens.

3 Check **Select** in the **Microphone** section.

### On Windows Vista

There are no settings regarding the microphone jack. If recording cannot be made, connect a microphone device to the computer and check that the recording device operates correctly, as follows.

1 Select **Sound** from Control Panel.

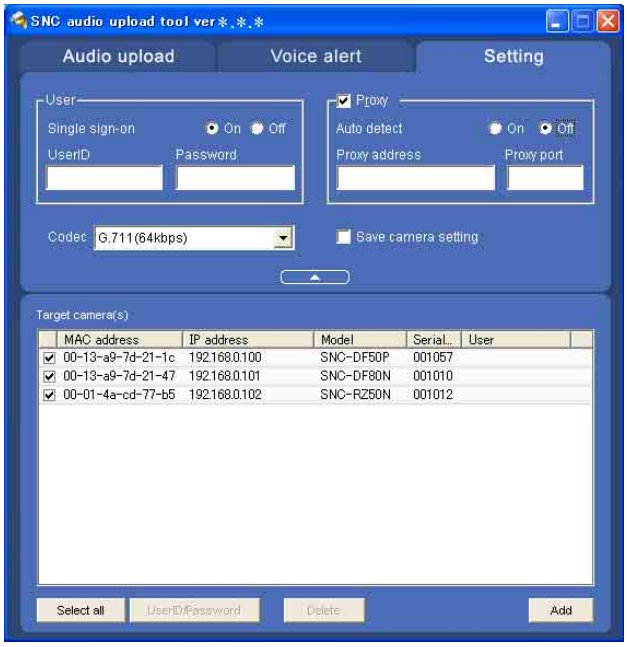
2 Open the Recording tab and check that Windows has recognized the hardware correctly.

## Using the SNC audio upload tool

When you start the SNC audio upload tool, the Setting tab is displayed.

### Setting tab

Use this menu to set the camera to transmit audio from a computer or upload an audio file.




#### User

Set the **User ID** and **Password** for the administrator. The factory setting of the User ID for the Administrator is “admin,” and the Password is “admin.”

**Single sign-on:** Select **On** to use the same user ID and same password for all the cameras. Select **Off** to set the user ID and password individually for each camera.
For the setting with **Off**, see “User ID/Password” on page 76.

**User ID:** This item can be set when **Single sign-on** is set to **On**. The user ID specified here is applicable to all cameras.

**Password:** This item can be set when **Single sign-on** is set to **On**. The administrator password specified here is applicable to all cameras.

#### Proxy

Check this box when you use a proxy server for communications. When it is not checked, direct communications with the camera is performed.

**Auto detect:** Select **On** to obtain the proxy setting automatically from Internet Explorer.

**Proxy address:** Type the IP address or host name of the proxy server.

**Proxy port:** Type the port number used for communications with the proxy server.

**Note**

The Proxy setting is applicable to all cameras. You cannot use individual proxy settings for each camera.

#### Codec

Select the audio mode (Codec) from the drop-down list.

#### Save camera setting

Check this box to store the current settings and camera list in the Setting tab. The same settings will be recalled when the camera is rebooted.

Click this button to hide the camera list. Click it again to display the camera list.

#### Target camera(s) (Camera list)

When the SNC audio upload tool starts, it automatically detects Sony network cameras connected to the local network and displays them in the camera list. Up to 256 cameras can be displayed in the list.
Select the check box on the left of the row to enable audio transmission and audio file uploading for that camera. You can then enable these functions simultaneously for multiple cameras.

**Notes**

- If you are using Windows XP Service Pack 2 or Windows Vista, disable the Windows Firewall function. Otherwise the camera list may not be displayed automatically. For details, see “Configuring Windows Firewall” in “When using Windows XP Service Pack 2” on page 10 or “Configuring Windows Firewall” in “When using Windows Vista” on page 12.
- The SNC audio upload tool cannot detect the cameras that are connected to the local network after the program has started.
- The SNC audio upload tool cannot detect the network cameras that are not equipped with the audio feature.

**Camera select checkbox:** The check box is located on the left end of the row. Select this check box to enable audio transmission and audio file uploading for that camera.

**MAC address:** Displays the MAC address of the network camera.

**IP address:** Displays the IP address of the network camera. “DHCP” is shown at the end of the IP

address when the IP address is obtained with a DHCP server.

**Model:** Displays the model name of the network camera.

**Serial:** Displays the serial number of the network camera.

**User:** Displays the specified user ID and password. The password is shown with turned letters.

### Select all

Click to select all the cameras in the camera list. This is usable when you delete all the cameras from the list or specify the same user ID and password for all the cameras,

### User ID/Password

Use this item when you specify the user ID and password to communicate with the selected camera(s) only.

Select the camera(s) from the camera list and click this button, and the following dialog opens.

Type the user ID and password for the administrator and click **OK**.

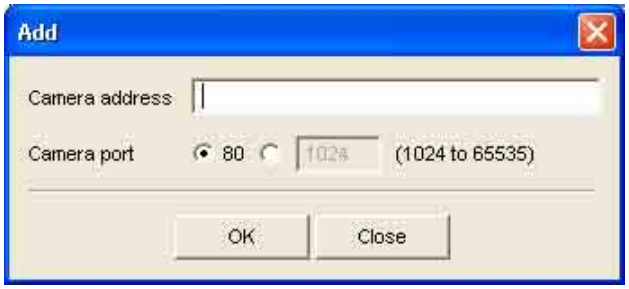
**Note**

If you select multiple cameras from the camera list, the same user ID and password are set for all the selected cameras. The factory settings of both items are “admin.”

### Add

Use this item when you add a new network camera to the camera list manually. Click this button, and the following dialog opens.

Type the IP address and port number for the camera to be added and click **OK**.




**Notes**

- An error dialog appears if the specified IP address already exists in the camera list, is assigned for a device other than the network camera, or does not exist in the network.
- You cannot add new cameras if the maximum of 256 cameras has been displayed in the camera list.

### Delete

Click this button to delete the selected camera(s) from the camera list.

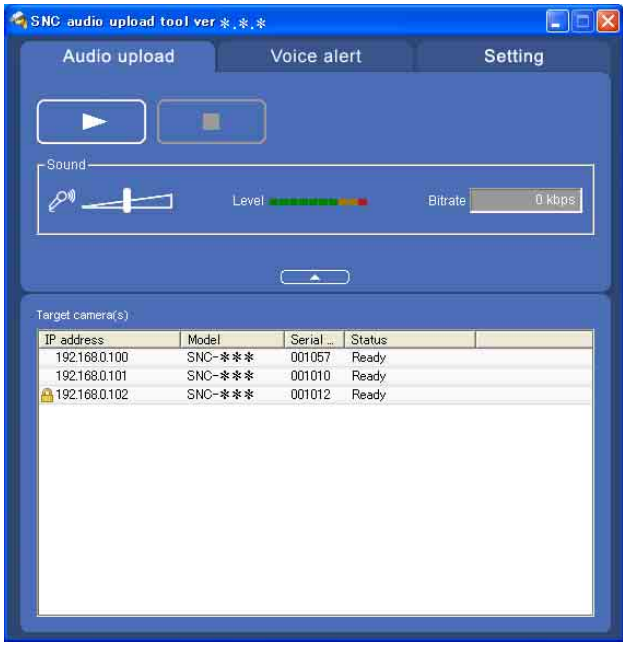
### Note on switching the tab

If an error occurs when you switch from the Setting tab to the Audio upload tab or the Voice alert tab, the camera is shown in red. In this case, check the camera settings and the user ID and password settings.

## Audio upload tab

Use this menu to transmit audio from the computer to the camera. You can transmit audio to multiple cameras displayed in the camera list simultaneously.

Before transmitting, set **Audio upload** to **Enable** on the Common tab of the Camera menu.




### ► (start) / ■ (stop)

Click ► (start) to start audio transmission. The transmission speed is displayed in the Bitrate box during transmission. You can adjust the microphone volume and enable/disable the muting, if necessary.

To stop the audio transmission, click ■ (stop).

**Notes**

- Audio transmission stops if you switch the tab during the transmission.
- Audio may be interrupted when the IP address is changed if **Obtain an IP address automatically (DHCP)** is set on **IP address** in the Network menu.
- Audio may be interrupted if you transmit it to many cameras simultaneously.

### Sound adjustment and indicators

Adjust the microphone input volume by moving the slider bar. You can adjust the volume even during transmission.
Click to enable/disable sound muting. The microphone input volume is displayed at the Level.
The transmission rate is displayed in the Bitrate box.

Click this button to hide the camera list. Click it again to display the camera list.

### Target camera(s) (Camera list)

Displays the cameras selected with the camera select checkbox of the camera list in the Setting tab.
The list shows the information and status of the selected cameras.

**IP address:** Displays the IP address of the network camera. “DHCP” is shown at the end of the IP address when the IP address is obtained with a DHCP server.

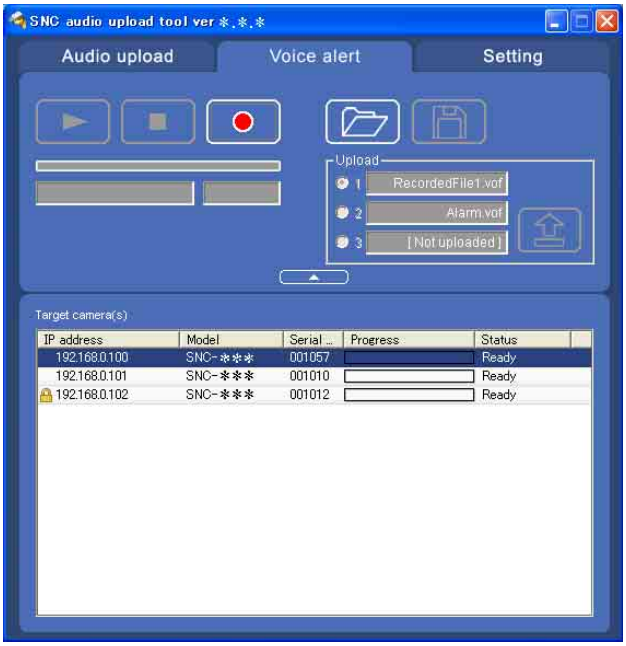
**Tip**

During SSL communication, appears on the left side of the IP address.
This camera does not support the SSL function.

**Model:** Displays the model name of the network camera.
**Serial:** Displays the serial number of the network camera.
**Status:** Displays the current status of the camera.
**Ready:** The camera is ready for connection.
**Connected:** The camera connection is successful.
**Fault:** The camera connection is unsuccessful.
**Sending:** Audio data being transmitted

## Voice alert tab

Use this menu to record the sound through the microphone connected to the computer and upload the recorded audio file to the camera. You can upload the audio file to multiple cameras selected from the camera list simultaneously.




### (playback)

To start playback, open the recorded file or another audio file and click this icon.
You can check the recorded sound or the contents of the selected audio file. During playback, the progress bar shows playback progress.

### (stop)

Click to stop recording or playback.
When you click it during recording, recording stops, and you can review the recorded sound or upload the recording to the camera.
When you click it during playback, playback stops and the progress bar display returns to the start position.

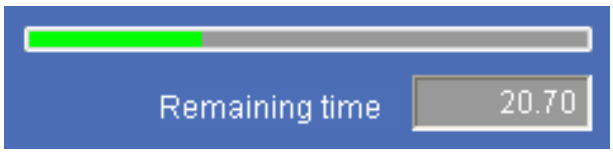
### (recording)

Click to start recording of the sound input to the computer microphone. The maximum recording time is 30 seconds.
The codec specified in the Setting tab is used for the recording.
The recorded file is displayed as “RecordedFile.vof.”

**Notes**

- Recording or playback stops if you switch the tab during recording or playback.
- The recorded file is not stored in the computer.

### Recording/playback progress bar




You can check recording or playback progress with this bar.
During recording, the right end of the bar represents 30 seconds and the remaining recording time is displayed below the bar.
During playback, the maximum time of the bar depends on the recorded time.

### (file open)

Click to select a previously saved audio file. You can play the selected audio file or upload it to the camera.

### (save)

Click to save the recorded audio file to the computer.

### Voice alert number select

Specify the voice alert number to which you want to upload the audio file. For example, select **1** when uploading to voice alert 1.
The name of the uploaded audio file is displayed to the right of the number.
"Not uploaded" is displayed if no audio file is uploaded to the camera.
The audio file name will be "RecordedFile" + "Voice alert number" + ".vof" if you upload an audio file recorded using and not stored in the computer.

**Notes**

- The voice alert number select is disabled if the camera specified in the Setting tab has old-version software.
- The audio file name for the camera selected in the camera list is displayed here. To check the uploaded file name, click on the camera in the camera list.
- The audio file is uploaded to the same voice alert number on all the cameras in the camera list. If the camera has old-version software, the audio file is automatically uploaded to voice alert number 1.

### (upload)

Click to upload the recorded or selected audio file to the camera specified in the Setting tab. Only one audio file can be uploaded to the camera at a time.

**Note**

Uploading a new audio file overwrites the audio file previously uploaded to the camera.

Click this button to hide the camera list. Click it again to display the camera list.

### Target camera(s) (Camera list)

Displays the cameras selected with the camera select checkbox of the camera list in the Setting tab.
The list shows the information and status of the selected cameras.

**IP address:** Displays the IP address of the network camera. "DHCP" is shown at the end of the IP address when the IP address is obtained with a DHCP server.

**Tip**

During SSL communication, appears on the left side of the IP address.
This camera does not support SSL function.

**Model:** Displays the model name of the network camera.
**Serial:** Displays the serial number of the network camera.
**Progress:** Displays the progress of audio file transmission.
**Status:** Displays the current status of the camera.
- **Ready:** The camera is ready for connection.
- **Inquiry:** The camera information is being asked for.
- **No func:** The camera does not support the Voice alert function.
- **Uploading:** The audio file is being uploaded.
- **Fault:** The audio file uploading is unsuccessful.
- **No Privilege:** The camera is not authorized to upload audio files.
- **Succeeded:** The audio file uploading is successful.

## Uploading the recorded audio file to the camera

**Tip**

Before operating, create an audio file and set the camera for audio uploading. Set the camera using the Setting tab.

1 Click (recording) in the Voice alert tab to start recording.

2 Click (stop) to stop recording.
Recording will stop automatically in 30 seconds.

3 Select the voice alert number.

4 Click (upload) to transmit the audio file to the camera.

### Saving the recorded audio file to the computer

1 Click (recording) in the Voice alert tab to start recording.

2 Click (stop) to stop recording.
Recording will stop automatically in 30 seconds.

3 Click (save).
The **Save as** dialog appears. Type the file name and save it.

### Uploading the saved audio file to the camera

1 Click (file open) in the Voice alert tab and select the audio file to be uploaded.

2 Select the voice alert number.

3 Click (upload) to transmit the audio file to the camera.

# Using the SNC video player — Playing video/audio file recorded with camera

The supplied SNC video player allows you to play video/audio data recorded with the camera on your computer.
This section explains the setup and operations of the SNC video player.

## Installing the SNC video player

1 Insert the CD-ROM in your CD-ROM drive.
A cover page appears automatically in your Web browser.
If it does not appear automatically in the Web browser, double-click on the index.htm file on the CD-ROM.

When you are using Windows Vista, pop-up "AutoPlay" may appear. For details, "Installing software" in "When using Windows Vista" on page 11.

2 Click the **Setup** icon of SNC video player.
The "File Download" dialog opens.

When you are using Windows XP Service Pack 2 or Windows Vista, a message regarding the active contents may appear. For details, see "Installing software" in "When using Windows XP Service Pack 2" on page 9 or "Installing software" in "When using Windows Vista" on page 11.

3 Click **Open**.

**Note**

If you click "Save this program to disk" on the "File Download" dialog, you cannot install the player correctly.
Delete the downloaded file, and click the **Setup** icon again.

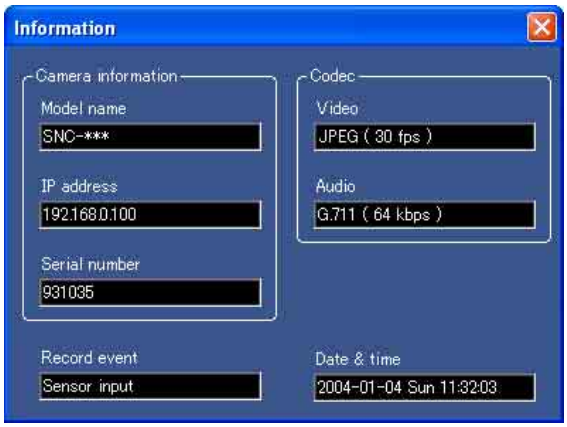
4 Install the SNC video player following the wizard displayed.
If the Software License Agreement is displayed, read it carefully and accept the agreement to continue installation.

## Using the SNC video player

**1** Start the SNC video player.

**2** Click the (browse) icon.
The Select File dialog opens.

**3** Select the file you want to play.
Click INFO on the top of the screen, and file information dialog appears.




### File dialog

**Model name:** Model name of the camera with which the file is recorded.
**IP address:** IP address of the camera with which the file is recorded.
**Serial number:** Serial number of the camera with which the file is recorded.
**Video:** Video Codec
**Audio:** Audio Codec
**Record event:** Type of event used for the recording: **Sensor input** or **Motion detection**.
**Date&time:** Recording date and time

### Playing a video/audio file

Click (start) to start playing from the beginning of the selected file.
To freeze the movie temporarily, click (pause).
Click again to restart playing from the frozon point.
To stop playing, click (stop).
To restart playing from the beginning, click (start) again.
Play stops when the file is played to the end.

### Playing from a specified point

Move the slider bar below the image display, and playback will start from the position of the slider bar.

### Adjusting the sound

Adjust the playing sound volume by moving the slider bar. Move it to the left end for the minimum volume, and to the right end for the maximum volume.
Click (speaker) to enable/disable the sound muting.
When sound muting is on, no sound is heard even if you move the slider bar.

### Saving an image

Click (capture) icon during playing or pause and the captured image is displayed in a pop-up dialog. To save the image, click **Save** on the dialog. You can specify the destination to which the image is to be stored and select the JPEG or Bitmap format.

### Changing the view size

Click **× 1/4**, **× 1/2**, **× 1**, **× 2** to change the view size. The monitor is displayed by the view size as you selected.
When you click **× 1**, the original size of image is displayed.
The selected view size button flips.

# Using the SNC privacy masking tool — Masking a Camera Image

The supplied SNC privacy masking tool allows you to mask parts of the camera image to be transmitted.

## Installing the SNC privacy masking tool

**1** Insert the CD-ROM in your CD-ROM drive.
A cover page appears automatically in your Web browser.
If it does not appear automatically in the Web browser, double-click on the index.htm file on the CD-ROM.

When you are using Windows Vista, pop-up "AutoPlay" may appear. For details, "Installing software" in "When using Windows Vista" on page 11.

**2** Click the **Setup** icon of SNC privacy masking tool.
The "File Download" dialog opens.

When you are using Windows XP Service Pack 2 or Windows Vista, a message regarding the active contents may appear. For details, see "Installing software" in "When using Windows XP Service Pack 2" on page 9 or "Installing software" in "When using Windows Vista" on page 11.

**3** Click **Open**.

**Note**

If you click "Save this program to disk" on the "File Download" dialog, you cannot install the program correctly. Delete the downloaded file, and click the **Setup** icon again.

**4** Install the SNC privacy masking tool following the wizard displayed.
If the Software License Agreement is displayed, read it carefully and accept the agreement to continue installation.

## Using the SNC privacy masking tool

The SNC privacy masking tool consists of the Main tab to set the privacy mask positions and the Setting tab to prepare for connection to the camera.

When you start the SNC privacy masking tool, the Setting tab is displayed.

### Setting tab

Before creating a privacy mask, set the following items in the Setting tab to allow connection to the camera.

**Administrator name:** Type the ID of the administrator of the camera to be connected.
**Administrator password:** Type the password of the administrator of the camera to be connected.

**Tip**

The factory settings of both items are "admin."

**Camera address:** Type the IP address or host name of the camera to be connected.
**Camera port No.:** Type the port number of the camera to be connected.

When you use a proxy server for camera connection, check the Use proxy check box and set the following items.

**Proxy server address:** Type the IP address or host name of the proxy server.
**Proxy server port No.:** Type the port number of the proxy server.

Preparations for connecting to the camera are now completed.

### Main tab

Set the privacy mask.

**Note**

If the video codec of the camera is set to **H.264**, the Main tab window is not displayed even if you click in the Main tab.
In this case, select **JPEG** or **MPEG4** in **Mode** of the Camera menu (page 35) and operate again.

**Viewer**
A live image of the camera is displayed. You can specify the position of the privacy mask in this area.

**Numbers**
Displays the number of privacy masks that have been set.

**Rectangles**
Displays the frames of the privacy masks that have been set. This is useful when the masks overlap.

**Privacy mask setting section (No.1 to No.7)**
Allows you to set or delete the privacy mask.
You can set up to eight privacy masks and the mask color.

**Set**
Register the area specified on the viewer as a privacy mask area.
Click **Set** and the portion of the viewer image is masked with the privacy mask. The color of the privacy mask is that selected with the **Color** drop-down list.

**Note**

The position of the privacy mask may shift if you switch **Stabilizer On/Off** (page 32). Modify the mask position after you have changed the stabilizer setting.

**Clear**
Click to delete the privacy mask.

**Color**
Specify the color of privacy masks. The color is common to every privacy mask.
The selectable colors are as follows:
**Black**, **White**, **Gray**, **Red**, **Green**, **Blue**, **Cyan**, **Yellow**, **Magenta**

**All clear**
Click to delete all the privacy masks simultaneously.

## Setting a privacy mask

To set a privacy mask in a favorite position, operate as follows:

1 Specify the privacy mask area by dragging the mouse on the viewer in the Main tab.

2 Select the color of the mask from the **Color** drop-down list.

**Note**

The color is common to every privacy mask. The color last selected is applied.

3 Select the desired privacy mask number in the privacy mask setting section and click **Set** of the corresponding number.
The mask is displayed on the viewer.

# Using the Custom Homepage Installer

The supplied Custom Homepage Installer allows you to store the homepage that you have created in the camera and watch it.

### Notes on creating the homepage

When you are creating the homepage, note the following points.

- The file name should be typed using up to 24 characters including the extension.
- The file size of the homepage should be 2.0 MB or less.
- To see the created homepage, set the **Homepage** in the System menu.

## Uploading the homepage to the camera using the Custom Homepage Installer

**1** Insert the CD-ROM in your CD-ROM drive.
A cover page appears automatically in your Web browser.
If it does not appear automatically in the Web browser, double-click on the index.htm file on the CD-ROM.

When you are using Windows Vista, pop-up "AutoPlay" may appear. For details, "Installing software" in "When using Windows Vista" on page 11.

**2** Click the **Setup** icon of Custom Homepage Installer.
The "File Download" dialog opens.

When you are using Windows XP Service Pack 2 or Windows Vista, a message regarding the active contents may appear. For details, see "Installing software" in "When using Windows XP Service Pack 2" on page 9 or "Installing software" in "When using Windows Vista" on page 11.

**3** Click **Open**.
The installer starts and notes are displayed.

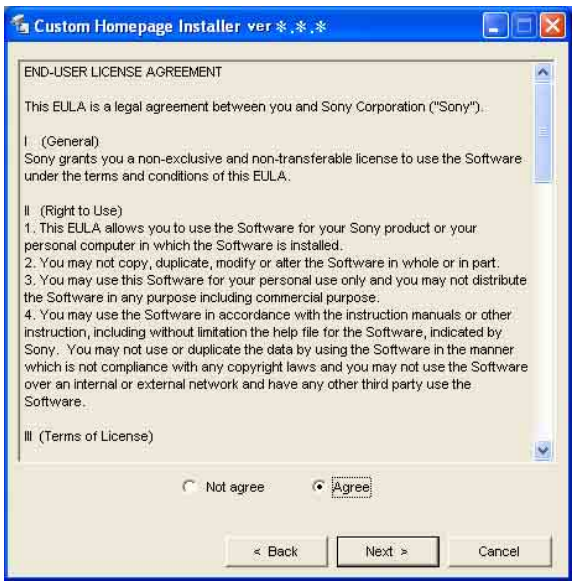
When you are using Windows Vista, message "User Account Control – An unidentified program wants access to your computer" may appear. In this case, click **Allow**.

Custom Homepage Installer ver ✻.✻.✻
Operating Precautions
The total size of Custom Homepage need be less than 2.0MB, and more than 2.5MB free space is required in the built-in memory of the camera.
Need to log in as Administrator to run the program.
The Image Memory function of the camera need set "Off".
The camera will be rebooted after the installation is completed.
< Back
Next >
Cancel

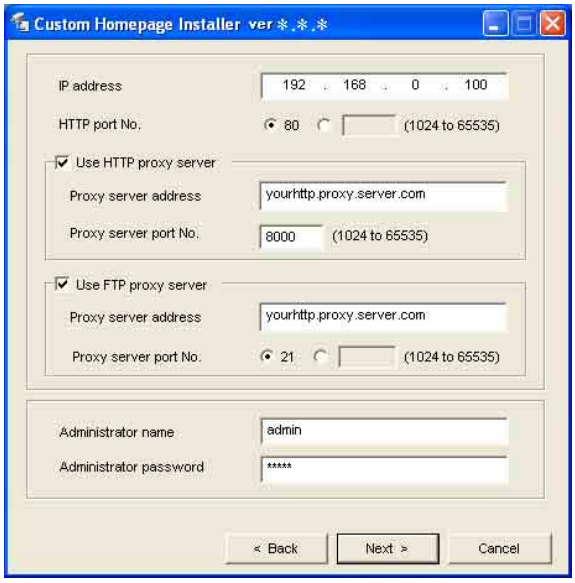
**Note**

If you click "Save this program to disk" on the "File Download" dialog, the CustomHomepageInstaller.exe file will be saved on the computer. Double-click the saved file to start it.

**4** Read the notes carefully, and click **Next**.
The Software License Agreement is displayed.


Custom Homepage Installer ver ✻.✻.✻
END-USER LICENSE AGREEMENT
This EULA is a legal agreement between you and Sony Corporation ("Sony").
I (General)
Sony grants you a non-exclusive and non-transferable license to use the Software under the terms and conditions of this EULA.
II (Right to Use)
1. This EULA allows you to use the Software for your Sony product or your personal computer in which the Software is installed.
2. You may not copy, duplicate, modify or alter the Software in whole or in part.
3. You may use this Software for your personal use only and you may not distribute the Software in any purpose including commercial purpose.
4. You may use the Software in accordance with the instruction manuals or other instruction, including without limitation the help file for the Software, indicated by Sony. You may not use or duplicate the data by using the Software in the manner which is not compliance with any copyright laws and you may not use the Software over an internal or external network and have any other third party use the Software.
III (Terms of License)
Not agree
Agree
< Back
Next >
Cancel

**5** Read the agreement carefully, select **Agree** if you accept it, then click **Next**.




**6** Type the IP address of the camera to be uploaded in the IP address box.

**7** Specify the HTTP port No. of the camera.
Initial HTTP port No. is set to 80.

**8** When you use a proxy server, set the following:
For the proxy server of your environments, consult your network administrator.

**When using an HTTP proxy server:**
Select **Use HTTP proxy server**, and type your settings in the Proxy server address and Proxy server port No. boxes.

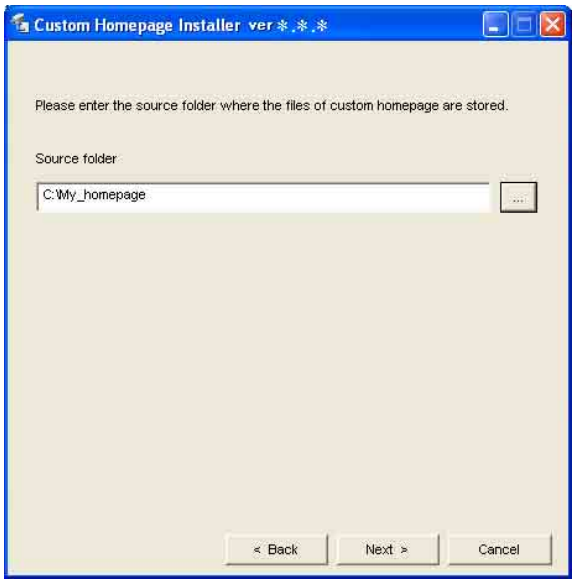
**When using an FTP proxy server:**
Select **Use FTP proxy server**, and type your settings in the Proxy server address and Proxy server port No. boxes.

**Note**

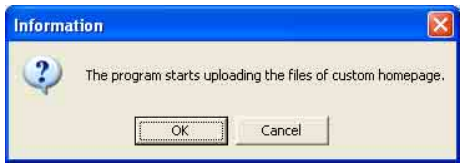
If you cannot establish communications with the camera using the proxy server being used, connect the camera to the local network and run the installer without using the proxy server.

**9** Type the Administrator name and Administrator password of the camera to be uploaded.
The factory settings of both items are “admin.”

**10** Confirm that all items are correct, then type the path of the folder you saved the homepage in the Source folder or click [...] to specify the folder. Click **Next>** to continue.




**11** Type the path for the folder in which your homepage is stored in the Source folder box, then click **Next**.

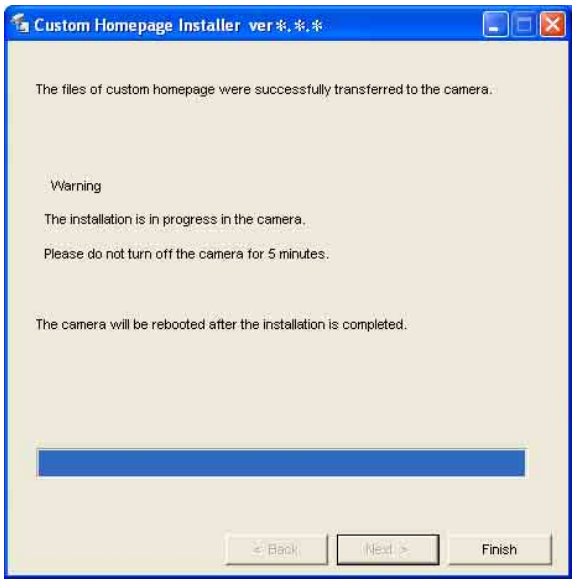



**12** Click **OK**.
Uploading of the homepage file starts.

**Note**

Do not turn off the camera until the camera is rebooted after uploading the homepage file.

The following page will appear after a while.


Custom Homepage Installer ver*.*.*
The files of custom homepage were successfully transferred to the camera.
Warning
The installation is in progress in the camera.
Please do not turn off the camera for 5 minutes.
The camera will be rebooted after the installation is completed.
< Back
Next >
Finish

After displaying this page, the camera will be adjusted and rebooted automatically in five minutes.

**13** Click **Finish** to exit the program.

# Assigning the IP Address to the Camera Using ARP Commands

This section explains how to assign an IP address to the camera using ARP (Address Resolution Protocol) commands without using the supplied setup program.

**Note**

When you turn on the camera, execute the ARP and PING commands within 5 minutes. Also when you restart the camera, execute the operation within 5 minutes.

**1** Open the command prompt on the computer.

**2** Enter the IP address and the MAC address of the camera to assign a new IP address, using the following ARP commands.

```
arp -s <Camera's IP address> <Camera's MAC address>
ping -t <Camera's IP address>
```

Example:

```
arp -s 192.168.0.100  08-00-46-21-00-00
ping -t 192.168.0.100
```

**3** When the following line is displayed on the command prompt, hold down **Ctrl** and press **C**. The display stops.

```
Reply from 192.168.0.100:bytes=32 time...
```

You will normally receive a reply after about 5 repetitions of “Request time out.”

**4** Wait until the execution of PING finishes, then input the following code.

```
arp -d 192.168.0.100
```

**Note**

If you do not receive a reply, check the following:
– Did you enter the ARP commands within 5 minutes after it was turned on?
If not, turn off the camera and restart the operation.
– Is the NETWORK indicator on the camera flashing?
If the indicator goes off, the network connection has a problem. Connect the network correctly.
– Did you enter the IP address previously used for another device?
Assign a new IP address to the camera.
– Do the computer and the camera have the same network address?
If not, set the same network address on the computer and the camera.

# Using the SNMP

This unit supports SNMP (Simple Network Management Protocol). You can read MIB-2 objects using software such as SNMP manager software. This unit also supports the coldStart trap which occurs when the power is turned on or the unit restarts, and the Authentication failure trap which informs of an illegal access using SNMP.
Using CGI commands, you can set community name and access limitation, host to send traps, and some MIB-2 objects. To allow these settings, you need authentication by the camera administrator.

## 1. Inquiry Commands

You can check the SNMP Agent settings using the following CGI commands.

<Method>
GET, POST
<Command>
http://ip_adr/snmpdconf/inquiry.cgi?inqjs=snmp
(JavaScript parameter format)
http://ip_adr/snmpdconf/inquiry.cgi?inq=snmp
(standard format)

With the above inquiry, you can obtain the following setting information. The following explains the setting information using the inqjs=snmp (JavaScript parameter) format.

var sysDescr="SNC-DF85", "SNC-DF80" or "SNC-DF50" ...①
var sysObjectID="1.3.6.1.4.1.122.8501" ...②
var sysLocation="" ...③
var sysContact="" ...④
var sysName="" ...⑤
var snmpEnableAuthenTraps="1" ...⑥
var community="public,0.0.0.0,read,1" ...⑦
var community="private,192.168.0.101,read,2" ...⑧
var trap="public,192.168.0.101.1" ...⑨

① describes the case of "mib-2.system. sysDescr.0". You cannot change this parameter.

② describes the case of "mib-2.system. sysObjectID.0". You cannot change this parameter.

③ describes the case of "mib-2.system. sysLocation.0". This field is used to describe information on the location of this camera. Nothing is set at the factory.

④ describes the case of "mib-2.system. sysContact.0". This field is used to describe the information on administrator of this camera. Nothing is set at the factory.

⑤ describes the case of "mib-2.system. sysName.0". This field is used to describe administration node of this camera. Nothing is set at the factory.

⑥ describes the case of "mib-2.snmpEnable AuthenTraps.0". This example shows when "1" (enable) is set. With this setting, a trap occurs when there is an Authentication failure. When "2" (disable) is set, no Authentication failure trap occurs.

⑦ describes the community attributes. This example shows the identification number "ID=1", the community name public, and enables read from any IP address (0.0.0.0).

⑧ describes the community attributes, similarly to ⑦. This example shows the identification number ID=2, the community name "private", and enables "read" by the SNMP request packet from the host "192.168.0.101".

⑨ describes the attributes to send a trap. This example shows the identification number "ID=1", the community name "public", and enables sending of traps to the host having the IP address "192.168.0.101".

## 2. Setting Commands

The unit supports the following setting commands of SNMP.

<Method>
GET, POST
<Command>
http://ip_adr/snmpdconf/snmpdconf.cgi?
<parameter>=<value>&<parameter>=...&...

First, perform the settings of the following parameters.

1) sysLocation=<string>
Set the case of "mib-2.system.sysLocation.0" in the <string> position. The maximum length of <string> is 255 characters.

2) sysContact=<string>
Set the case of "mib-2.system.sysContact.0" in the <string> position. The maximum length of <string> is 255 characters.

3) sysName=<string>
Set the case of “mib-2.system.sysName.0” in the <string> position. The maximum length of <string> is 255 characters.

4) enaAuthTraps=<value>
Set the case value of “mib-2.snmp.snmp EnableAuthenTraps.0” in the <string> position. Type “1” (enable) or “2” (disable) in the <value> position.

5) community=<ID>,r, <communityName>,<IpAddressString>
Set the community attributes. <ID> describes the setting identification number (1 to 8) <communityName> describes the community name to be set, and <IpAddressString> describes the IP address of the host you allow access (0.0.0.0 for any host).

**Example:** To allow reading by any host in the “private” community and having the ID number “2”.
community=2,r,private,0.0.0.0

6) trap=<ID>,<communityName>, <IpAddressString>
Set the attributes to send traps to. <ID> describes the setting identification number (1 to 8), <communityName> describes the community name to send traps to, and <IpAddressString> describes the IP address of the host to send traps to.

**Example:** To specify the destination of traps as the public community and the ID number “1”.
trap=1,public,192.168.0.101

7) delcommunity=<ID>
This parameter is used to delete the previous community setting. <ID> describes the community setting identification number (1 to 8).

8) deltrap=<ID>
This parameter is used to delete the previous setting of the host to send traps to. <ID> describes the trap setting identification number (1 to 8).

When you have finished changing the SNMP setting information using the above parameters 1) to 8), check the changed settings using an inquiry commands. If the changed settings are OK, restart the SNMP using the following CGI command.

#### SNMP restart command

<Method>
GET, POST
<Command>
http://ip_adr/snmpdconf/snmpdconf.cgi?snmpd=restart

# Glossary

## ActiveX control

A component program object that can be used with web pages or other application programs. The technology for creating ActiveX control is part of software developed by Microsoft.

## ARP commands

The commands for checking the entry of the IP address and MAC address in a host computer, or for updating them.

## Bandwidth control

To limit the amount of transmitted data.

## Bit rate

The rate at which data bits are transmitted.

## Capture

To display the audio and video digital data from the video equipment on a computer.

## Codec

Software/hardware for coding/decoding video and audio data.

## Default gateway

Device that can be used to access the other network.

## DHCP server

Abbreviation for Dynamic Host Configuration Protocol server. The IP address of a terminal without an individual IP address can be automatically distributed by the Dynamic Host Configuration Protocol (DHCP). The DHCP server assigns the IP addresses to the terminals.

## Digital zoom

Zooming in/out function of an image without using an optical zooming function.

### DNS server

Abbreviation for Domain Name System server. As an IP address required for connecting to the device on an IP network is numerical and difficult to remember, the Domain Name System was established. A domain name is alphabetic and is easier to remember. When a client computer uses a domain name to connect to another computer, it asks a DNS server to translate the name into the corresponding IP address. Then the client computer can obtain the IP address of the computer to be connected.

### Frame rate

The number of frames of a moving image that can be transmitted per a second.

### FTP client

Software to be used for accessing the FTP server.

### FTP server

A server to be used to transfer files via a network.

### HTTP port

A port used to communicate between the web server and the web client such as a web browser.

### H.264

One of the image compression formats. The standard written by the JVT (Joint Video Team) , joint organization for standardization composed of ISO and ITU-T. H.264 is capable of transmitting video data at a higher compression rate than that of MPEG4.

### IP address

Abbreviation for Internet Protocol Address. An individual IP address is basically assigned to each piece of equipment connected to the Internet.

### Java applet

A program written in Java language that can be used in the web browser.

### Java Virtual Machine

Software that transfers the Java applet's byte code to the native code of your system to execute it.

### JPEG

Abbreviation for Joint Photographic Expert Group. The still image compression technology or standards of the ISO (International Organization for Standardization) and ITU-T. Popularly used as image compression format on the Internet, etc.

### MAC address

A network address that uniquely identifies each LAN card.

### MPEG4

Abbreviation for Moving Picture Experts Group4. One of the MPEG standards for image compression format aiming to transmit images at a high compression rate with lower picture quality.

### Multicast

The class D IP address assigned between 224.0.0.0 and 239.255.255.255. Using this IP address enables you to transmit the same data to multiple equipment.

### Network address

The portion that identifies the local network (subnet) in an IP address.

### Network bandwidth

Bit rate that can be used for networking.

### NTP server

Network time server that transmits and receives time information over the networks.

### Passive mode

The mode whereby a client FTP allows TCP connection for data transmission to the FTP server.

### PoE

Technology to supply the electric power with LAN cable.

### POP server

A server for storing incoming e-mail until you have read it.

### Primary DNS server

One of the DNS servers that can first reply to a request by connected devices or other DNS servers.

### Proxy server

A server or software that acts as an intermediary between a local network and the Internet so that it can connect to the Internet in place of a computer on a local network

### Saturation

The degree to which the color is pure.

### Secondary DNS Server

Subsidiary DNS server used when a primary DNS server cannot be used.

### SMTP server

A server for sending or relaying e-mail messages between servers.

### SNMP

A protocol for monitoring and managing network devices.

### Subnet mask

32-bit stream used to distinguish the subnet address from the IP address.

### TCP

Abbreviation for Transmission Control Protocol. A standard protocol used for the Internet connection. Compared with the other protocol, UDP, TCP provides reliable communication but the communication speed is slower.

### UDP

Abbreviation for User Datagram Protocol. A standard protocol used for the Internet connection. Compared with the other protocol, TCP, UDP can transmit data faster, but reliable communication is not guaranteed.

### Unicast

Transmission of the data to the specified equipment on a network by specifying a single address.

# Index


## A

abandoned object detection ..... 65
Access log ..... 31
Active ..... 67, 69
Active Directory ..... 44
ActiveX control ..... 9, 12, 14
ActiveX viewer ..... 18, 19
Adaptive rate control ..... 36
Adjust ..... 29
Administrator ..... 16, 47
Administrator e-mail address ..... 39, 50, 55
Administrator menu ..... 18, 26
Alarm ..... 51, 53, 56, 61
alarm ..... 51, 53, 56
Alarm buffer ..... 27, 53, 56
alarm buffer ..... 53, 56, 64
Alarm buffer Menu ..... 64
alarm detection ..... 50, 52, 56
Alarm duration ..... 60
Alarm interval ..... 71
Alarm out ..... 59
Alarm output ..... 24, 27, 59, 62
alarm output ..... 24, 59
Alarm output Menu ..... 59
Alarm recording ..... 56
Alarm sending ..... 50, 52
ARP commands ..... 85
ATA memory card ..... 31, 55, 58
Audio ..... 47
audio ..... 32
Audio codec ..... 32
audio output ..... 60
Audio port number ..... 37
Audio upload ..... 32
Authentication ..... 39, 49, 55
authentication ..... 39, 49, 55
authentication server ..... 41
authenticator ..... 41
Automatically adjust clock for daylight saving time changes ..... 30

## B

Backlight compensation ..... 33
Backup setting data ..... 31
bandwidth ..... 72
Bandwidth control ..... 36, 72
Bit rate ..... 36
bit rate ..... 36
Brightness ..... 34
brightness ..... 34
Built-in memory ..... 55, 58
built-in memory ..... 55, 58

## C

CA (Certificate Authority) ..... 41
CA certificate ..... 43, 45
Camera ..... 27
camera ..... 32
Camera Menu ..... 32
Cancel button ..... 27
Capacity warning ..... 55
Capture ..... 20
capture ..... 20, 22
certificate request ..... 42
CGI commands ..... 86
Client certificate ..... 42
client certificate ..... 42
Codec ..... 64
Color ..... 32
Common ..... 32, 49, 52, 55, 67
Contrast ..... 34
contrast ..... 34
Cropping ..... 35
cropping ..... 35
Current date & time ..... 29
Custom Homepage Installer ..... 83
custom settings ..... 34

## D

Date & time ..... 29
date and time ..... 29, 73
Date and time format ..... 29
Date time ..... 73
Date_No. ..... 57
Day/Night ..... 34, 62
day/night ..... 24
Day/Night mode ..... 34
daylight saving time ..... 30
Default gateway ..... 38
default gateway ..... 38
Default policy ..... 48
delete ..... 31
Delete custom homepage ..... 31
Delete voice alert file ..... 31
Detection ..... 67
Detection setting section ..... 67
Detection time ..... 70
DHCP server ..... 38
Digital zoom ..... 20
digital zoom ..... 20, 22
DNS server ..... 38
Domain suffix ..... 38
downloading images ..... 58
Dual codec ..... 17, 35
Dynamic IP address notification ..... 39
DynaView ..... 33

## E

EAP method ..... 42
Effective period ..... 51, 53, 54, 56, 57, 60, 61
e-Mail ..... 23
e-mail ..... 39, 49
e-Mail (SMTP) ..... 27, 49, 61
e-Mail (SMTP) Menu ..... 49
e-Mail (SMTP) notification ..... 39
e-mail address ..... 39
End time ..... 63
Exposure ..... 33
exposure ..... 33
Exposure compensation ..... 33
exposure compensation ..... 33
extension ..... 58

## F

Factory default ..... 30
factory settings ..... 30
File ..... 60, 63
File attachment ..... 50
file name ..... 50, 51, 52, 53, 56, 57
folder structure ..... 57
format ..... 31
Format ATA memory card ..... 31
format of date and time ..... 29
Frame rate ..... 20, 36
frame rate ..... 20, 21, 36
FTP ..... 23, 47
FTP client ..... 27, 62
FTP client function ..... 52
FTP client Menu ..... 52
FTP server ..... 27, 52
FTP server function ..... 58

FTP server Menu ..... 58
FTP server name ..... 52

## G

Glossary ..... 87

## H

H.264 ..... 17, 88
H.264 setting ..... 35
Home ..... 20
Homepage ..... 28
homepage ..... 28
Host name ..... 38
HTTP method ..... 40
HTTP notification ..... 40
HTTP port number ..... 38
HTTP request ..... 40
HTTP server ..... 40

## I

Image file name ..... 50, 52, 53, 56, 57
Image memory ..... 24, 27, 55, 62
Image memory Menu ..... 54
Image mode ..... 32
Image quality ..... 36
image quality ..... 36
Image size ..... 35
image size ..... 35
Inactive ..... 67, 69
information bar ..... 10
Information Bar message ..... 10
Initialize ..... 30
Internet Authentication Service ..... 44
Internet Explorer ..... 13
Interval ..... 30, 51, 54, 57
IP address ..... 7, 38
IP Setup Program ..... 7, 72

## J

Java ..... 19
Java applet viewer ..... 18, 19
JPEG ..... 17
JPEG setting ..... 35

## L

logging in ..... 17

## M

MAC address ..... 38
main viewer ..... 13, 17, 19
mask ..... 81
memory ..... 54, 55, 58
Message ..... 39, 50
Method ..... 40
Mic volume ..... 32
Microphone ..... 32
microphone ..... 32
Mode ..... 35, 59, 64
monitor image ..... 21
monitoring ..... 21
Moving object ..... 67
moving object detection ..... 67, 68
MPEG4 ..... 17
MPEG4 setting ..... 35
multicast ..... 37
Multicast address ..... 37
multicast address ..... 37
Multicast streaming ..... 37
multicast streaming ..... 37

## N

Network ..... 27, 38
network ..... 38
Network address/Subnet ..... 48
network bandwidth ..... 36
Network Menu ..... 38
NTP server ..... 30
NTP server name ..... 30

## O

Object detection ..... 27, 60
object detection ..... 65
Object detection Menu ..... 65
Object size ..... 68, 69
OK button ..... 26
operation mode ..... 35
Overwrite ..... 55
overwrite ..... 55

## P

passive mode ..... 52
Passive mode ..... 52
Password ..... 39, 47, 50, 52, 55
password ..... 39, 47, 50, 52, 55
PC clock ..... 29
periodical e-mail sending ..... 51
periodical recording ..... 57
Periodical recording ..... 57
Periodical sending ..... 51, 53
periodical sending ..... 53
Picture ..... 33
Play ..... 61
playing audio ..... 24
POP server ..... 39, 50, 55
POP server name ..... 39, 50, 55
port number ..... 40
Post-alarm period ..... 65
Pre-alarm period ..... 65
Primary DNS server ..... 38
privacy mask ..... 81
Private key password ..... 43
Proxy port number ..... 40
proxy server ..... 40
Proxy server name ..... 40

## R

Reboot ..... 30, 73
reboot ..... 30, 73
Recipient e-mail address ..... 39, 50
recipient e-mail address ..... 39, 50
Recording capacity ..... 64
recording capacity of the alarm buffer ..... 64
recording images ..... 23, 54
Recording time ..... 65
Release time ..... 71
Remote path ..... 52, 53
remote path ..... 53
removed object detection ..... 66
Repeat ..... 61
reset ..... 33
Reset camera menu ..... 33
Restart ..... 69
Restore setting ..... 31
Re-type password ..... 47, 52

## S

Saturation ..... 34
saturation ..... 34
saves the setting data ..... 31
Schedule ..... 27
schedule ..... 27, 63
Schedule Menu ..... 63
Secondary DNS server ..... 38
Security ..... 27
security ..... 48
Security function ..... 48

Security Menu ..... 48
Security Warning ..... 9, 10, 12, 66
Selected root directory ..... 55, 58
sending images ..... 23
Sensor input ..... 60
Sensor input mode ..... 29
Sequence number clear ..... 51, 53, 54, 56, 57
Serial number ..... 28
serial number ..... 28
Setting ..... 20
Setup Program ..... 7, 72
Sharpness ..... 34
sharpness ..... 34
shutter speed ..... 33
Shutter speed ..... 33
Single codec ..... 17, 35
SMTP server ..... 39, 49, 55
SMTP server name ..... 39, 49, 55
SNC audio upload tool ..... 74
SNC privacy masking tool ..... 81
SNC video player ..... 79
SNMP ..... 86
Software version ..... 28
software version ..... 28
special tags ..... 40
Stabilizer ..... 32
stabilizer ..... 32
Start time ..... 63
Status lamp ..... 69
Streaming ..... 37
Subject ..... 39, 50
Subnet mask ..... 38
subnet mask ..... 38
Suffix ..... 50, 51, 53, 56, 57
suffix ..... 50, 51, 53, 56, 57
Superimpose ..... 30
superimpose ..... 30
supplicant ..... 41
System ..... 27, 28
system ..... 28
System log ..... 31
System Menu ..... 28

## T

TCP ..... 25
TCP/UDP ..... 20, 25
TCP/UDP Transmission ..... 25
Test ..... 61
threshold ..... 67
Threshold setting slider bar ..... 67
time difference ..... 30
Time setting ..... 70
Time zone ..... 30
time zone ..... 30
Timer ..... 62
title bar ..... 28
Title bar name ..... 28
TLS mode ..... 42
Toggle ..... 62
transmission port number ..... 37
Trigger ..... 27
trigger ..... 20
Trigger Menu ..... 61

## U

UDP ..... 37
UDP (Multicast) ..... 25
UDP (Unicast) ..... 25
Unattended object ..... 67
unattended object detection 65, 68, 70
Unattended object setting ..... 70
Unicast streaming ..... 37
URL ..... 40
Use the same time schedule every day ..... 63
User ..... 16, 27, 47
user ..... 16, 45, 47
User Menu ..... 47
User name ..... 39, 47, 50, 52, 55
user name ..... 39, 47, 50, 52, 55
User preset ..... 34

## V

Video codec ..... 35
video codec ..... 35, 64
Video port number ..... 37
View size ..... 20, 22
view size ..... 20, 22
Viewer authentication ..... 48
Viewer mode ..... 16, 48
viewer mode ..... 48
Voice alert ..... 24, 27, 61, 63
Voice alert Menu ..... 60
voice alert number select ..... 78
volume ..... 20, 32

## W

warning mail ..... 55
welcome page ..... 13, 17, 28
Welcome text ..... 28
White balance ..... 33
white balance ..... 33
Window ..... 67, 69
Windows Firewall ..... 10
Windows Vista ..... 11
Windows XP Service Pack 2 ..... 9